SONY

Training Manual

2005 SXRD
Disassembly Manual

Models: KDS-R50XBR1
KDS-R60XBR1

Disassembly

Course: TVP-21D

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Introduction

Overview

This manual presents complete and concise step-by-step procedures for the disassembly of the chassis assemblies and the removal of all boards included in the 2005 SXRD chassis. As it is with any chassis disassembly or assembly process, care must be taken to remove chassis components without damaging the boards, wiring, or the chassis itself.

The procedures in this manual guide you through effective and efficient disassembly and reassembly processes for all areas in the 2005 SXRD chassis.

How to use this manual:

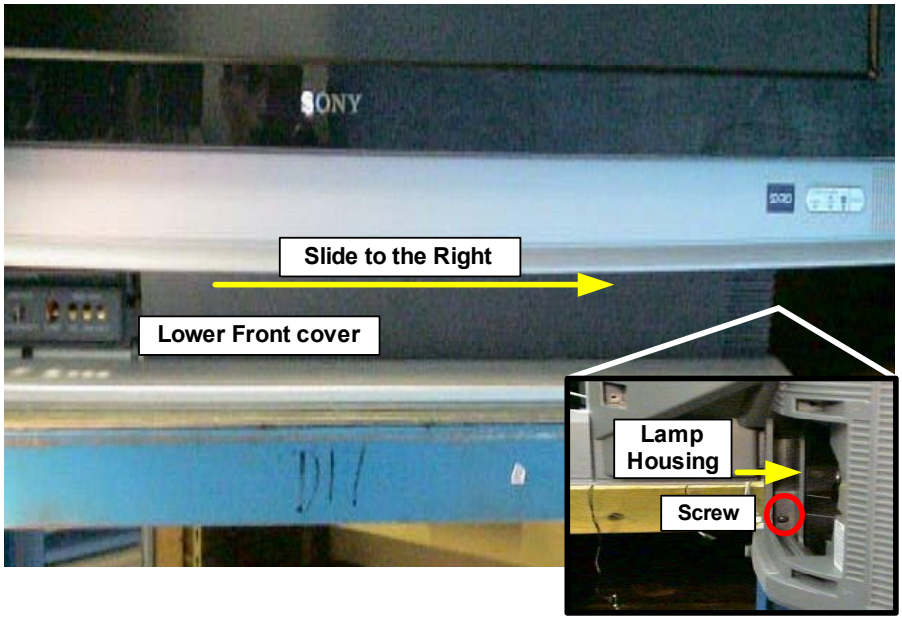
1) The manual can be sequentially followed from Chapter 1 through Chapter 7 for removal of the major chassis assemblies and the individual boards.

Chapter 8 illustrates the Screen Frame Assembly Removal

Chapter 9 is a quick reference for wire routing throughout the chassis.

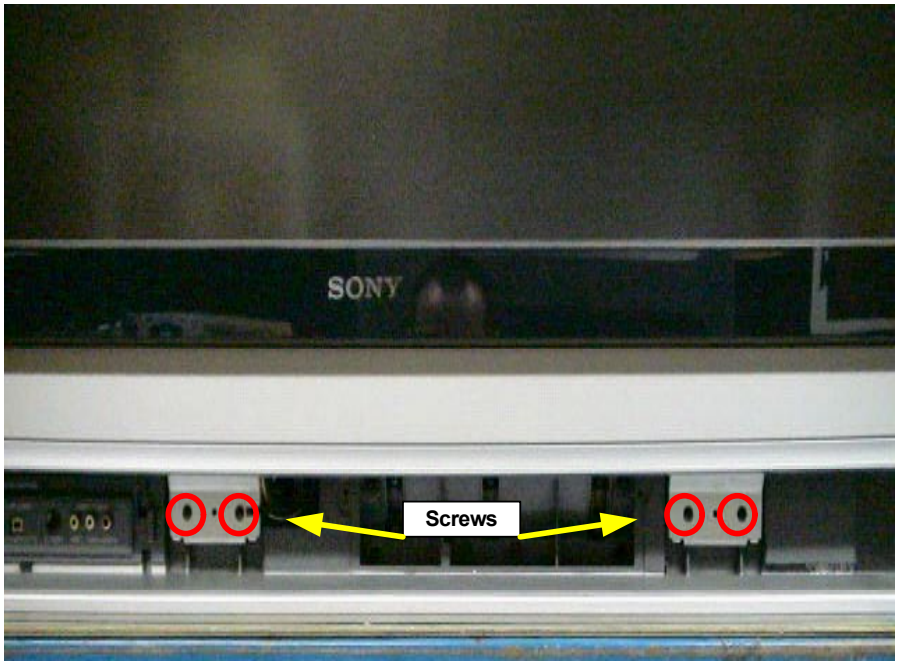
2) The chapters in the manual are also designed as stand alone procedures. Therefore, you can go directly to any specific chapter and proceed to remove that particular assemble or board. If the procedures in a previous chapter are necessary it is noted in steps 1 or 2 of the stand-alone procedure.

Chapter 1 - Screen Frame Removal



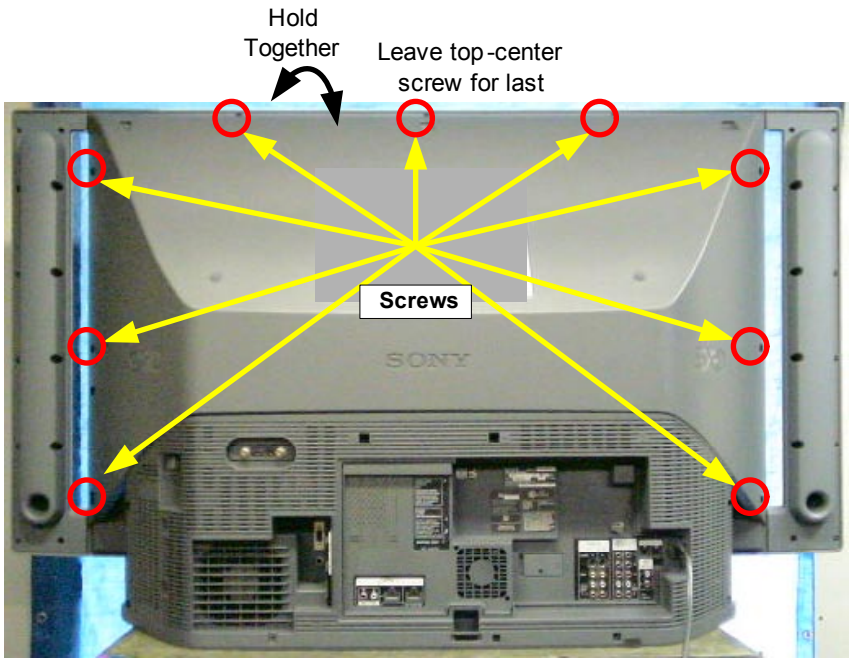
1

The lower front cover must be removed to access the screws that secure the two lower screen-frame brackets
Open the Lamp Door and remove 1 screw in the lower left hand corner when view from the rear of the unit .
Slide front cover to the right and remove.



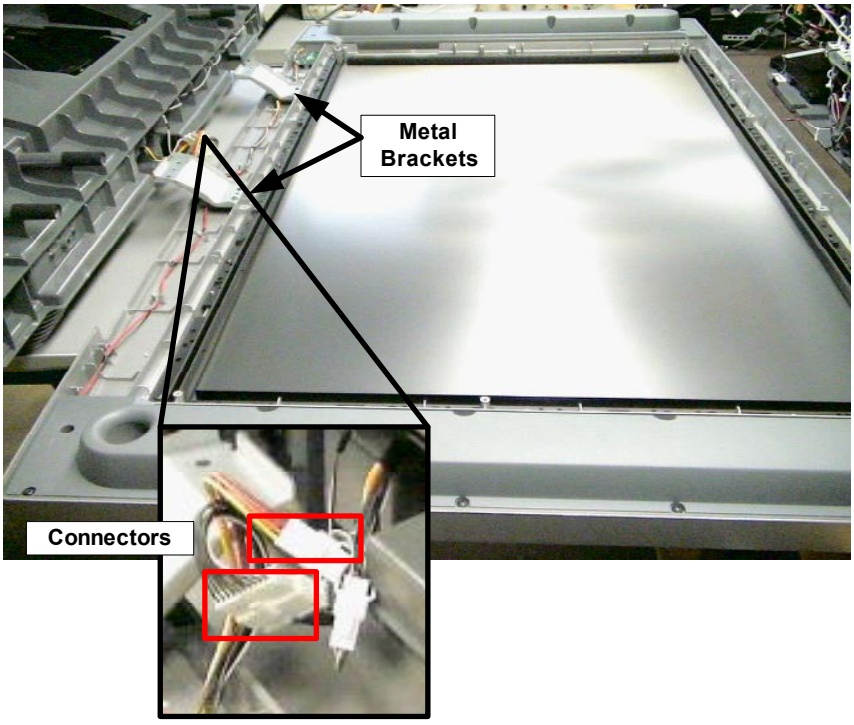
2

Remove 4 screws securing the lower screen-frame brackets.



3

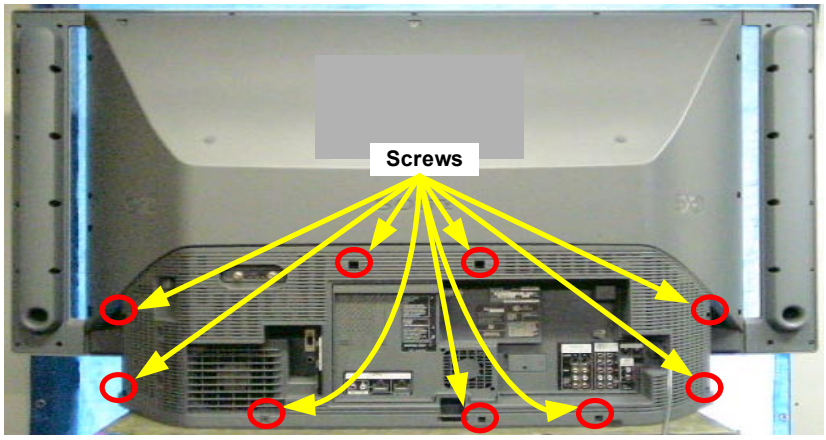
Remove 9 screws to release front Screen Frame assembly.
CAUTION: Leave the top-center screw in place while removing the eight other screws. Go around to the front of the unit. Hold the screen frame assembly and the rear mirror assembly together at the top while removing the last top-center screw. Pull the Screen Frame assembly off and lay down on a soft pad.



4

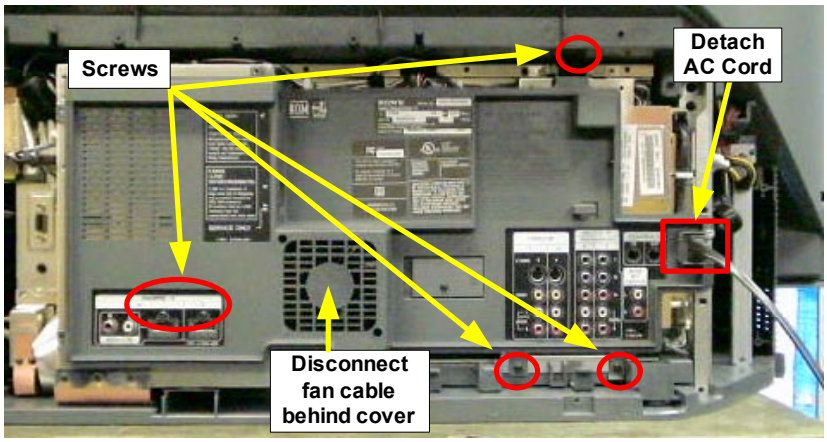
Disconnect 2 connectors
CAUTION: Do not stand the Screen Frame assembly on the metal brackets.

Chapter 2 - Rear & Sub Plastic Cover Removal



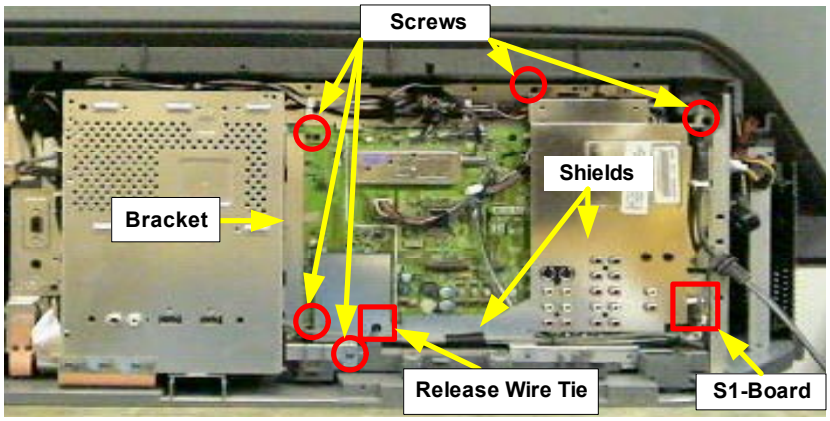
1

Remove 9 screws and pull rear plastic cover straight back and off.



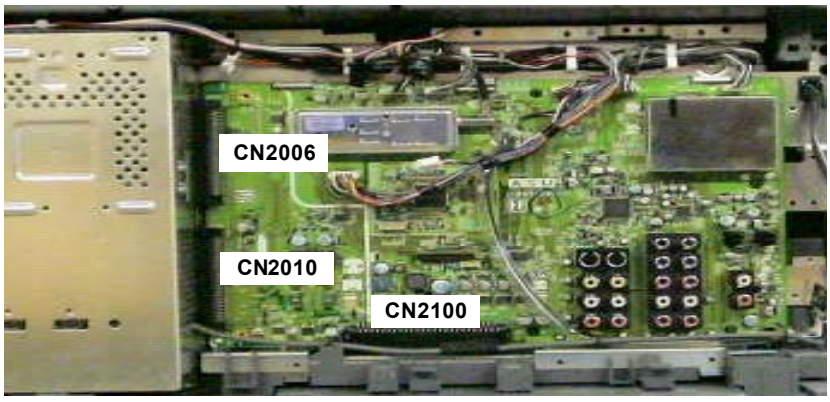
2

Remove 5 screws and detach AC cord from the slot. Pull sub plastic cover **slowly** straight back and off.
NOTE: Be careful of fan wire and connector behind sub-cover. Disconnect fan cable to completely remove cover.



3

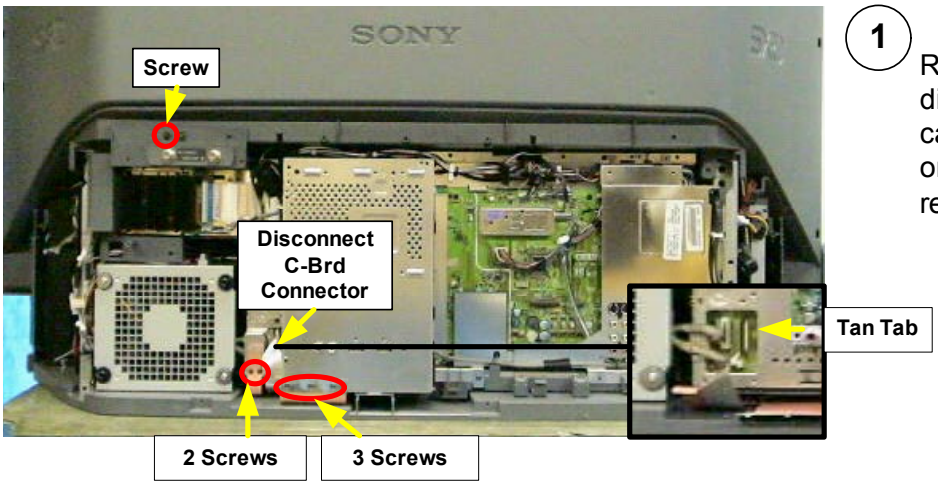
Remove 4 screws and release the one wire tie. Slide the bracket up slightly and pull off. Disconnect the S1-Board Remove both shields to access the ASU-Board.



4

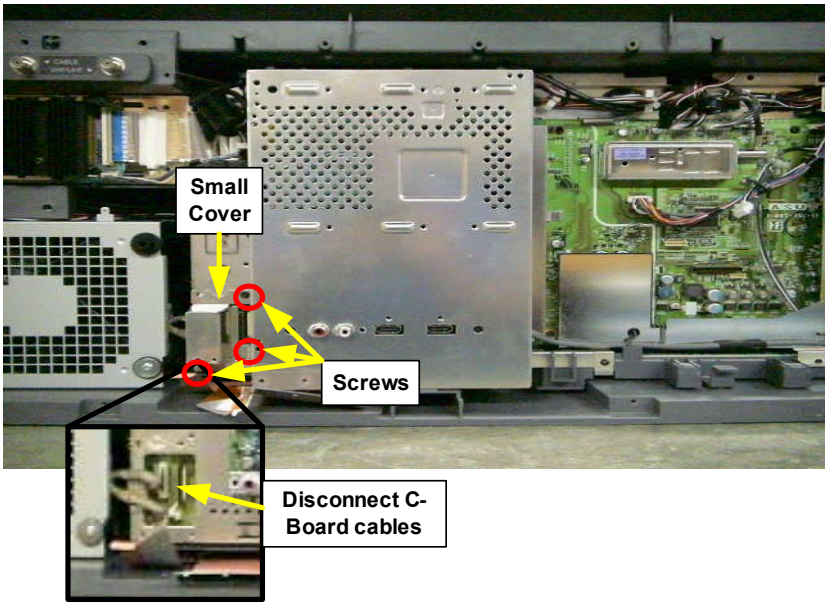
The ASU-Board can be probed for troubleshooting at this point of the disassembly process. It can not be remove at this point. Reference “ASU & G-Board Removal” section.

Chapter 3 - Chassis Assembly Removal



1

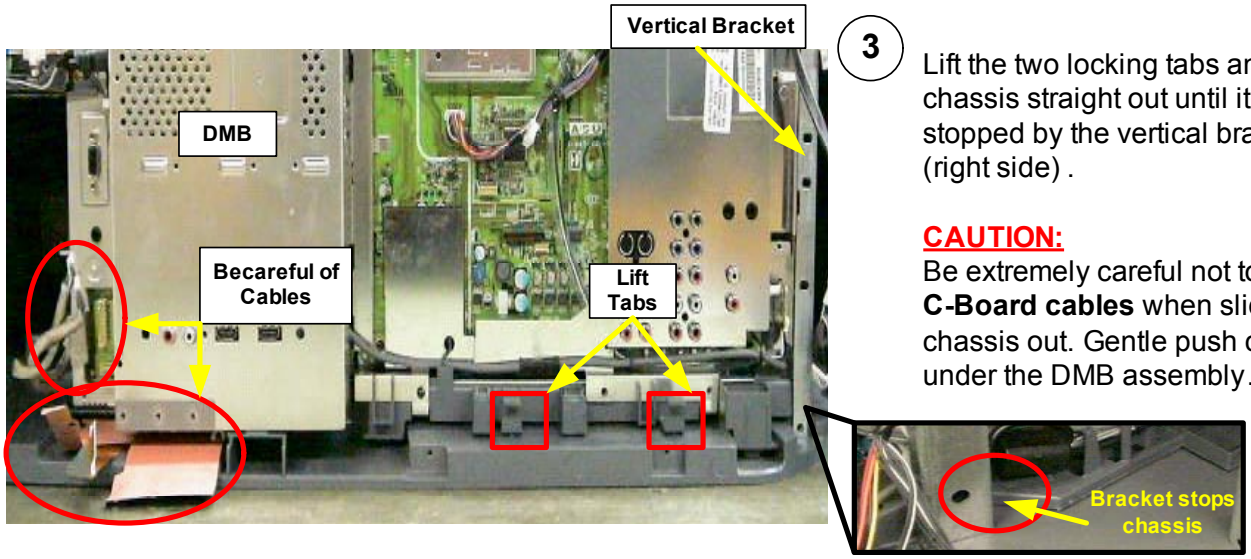
Remove 6 screws and disconnect the C-Board ribbon cable (Gentle press the Tan tab on the side of the connector to release cable.



2

Remove the small cover (3 screw) and disconnect C-Board cables.

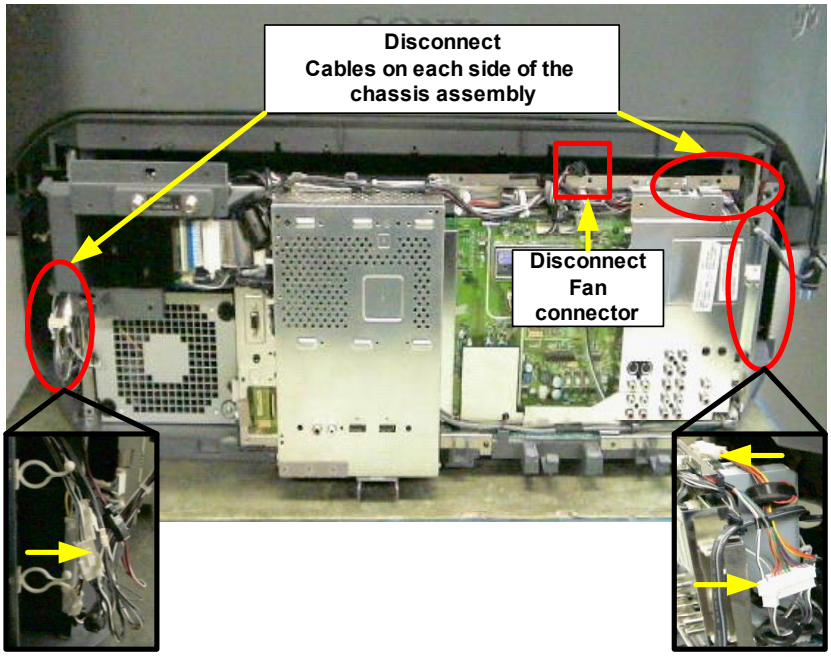
CAUTION:
Be extremely careful not to damage **C-Board cables** while removing the Chassis Assembly.



3

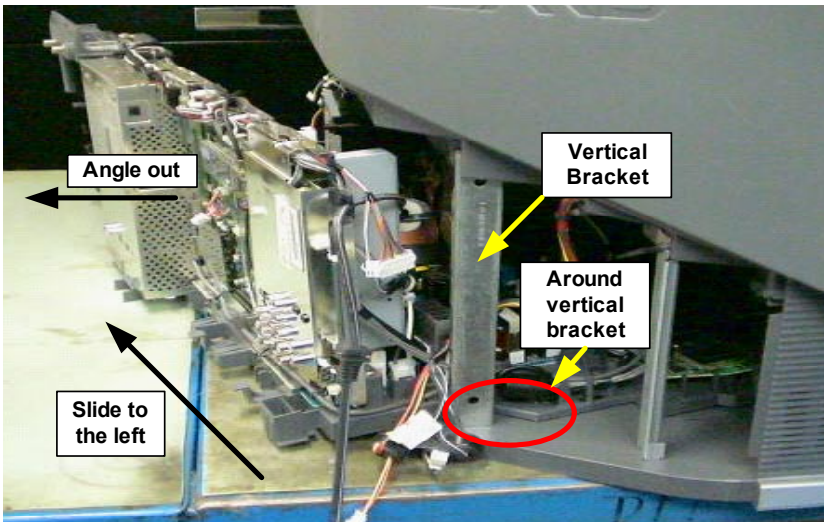
Lift the two locking tabs and slide chassis straight out until it is stopped by the vertical bracket (right side) .

CAUTION:
Be extremely careful not to damage **C-Board cables** when sliding the chassis out. Gentle push cables under the DMB assembly.



4

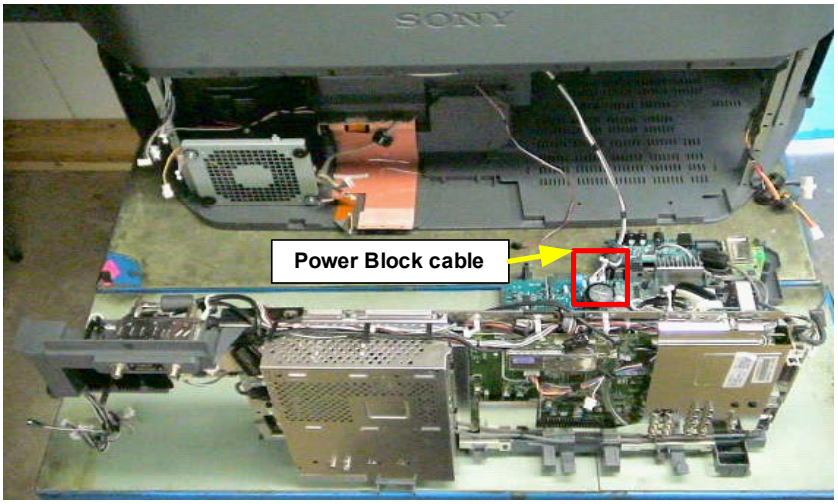
Slide Chassis out until it is stopped by the vertical bracket. Before attempting to remove the Chassis assembly disconnect the wires as illustrated in the photo.



5

Angle the left side of Chassis assembly out.
Slide the Chassis to the left (around the vertical bracket and pull chassis out.

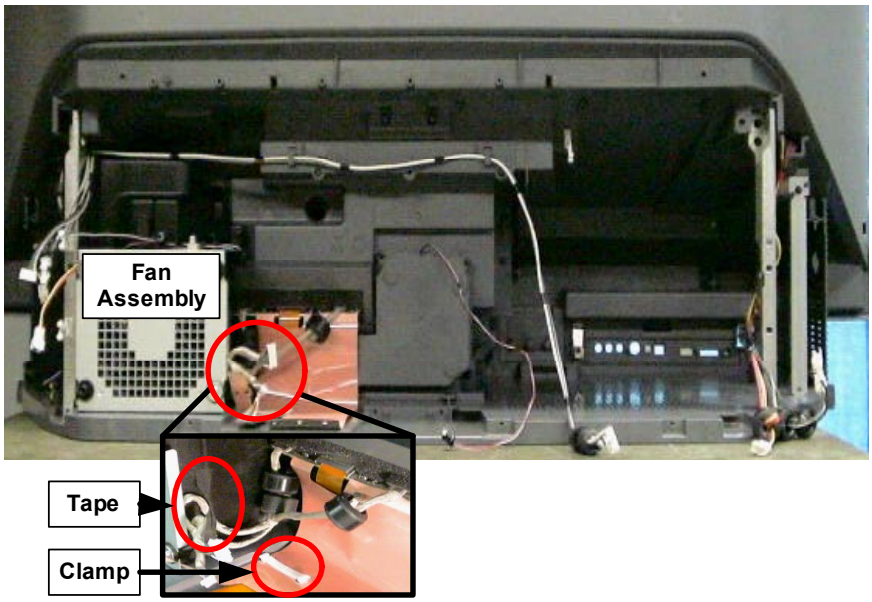
CAUTION:
Do not remove the vertical bracket. This bracket is critical support for the Upper mirror and screen block.



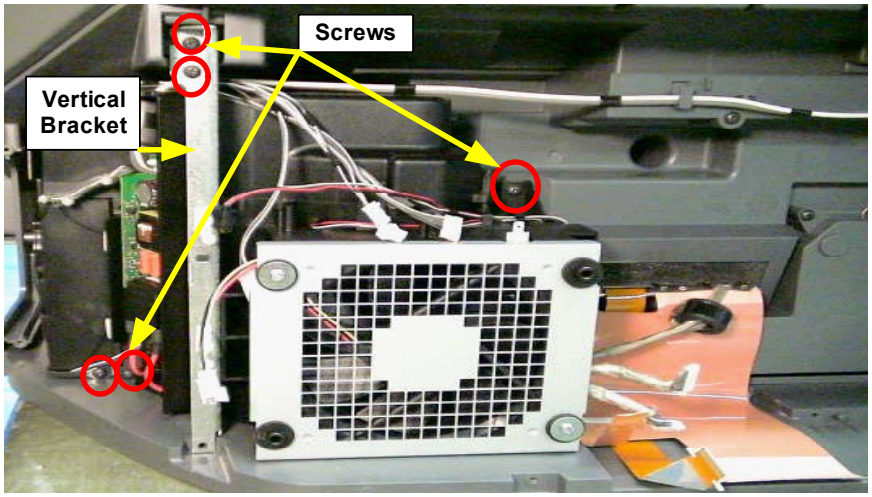
6

Completely remove the Chassis assembly and disconnect Lamp Power Supply Block cable.

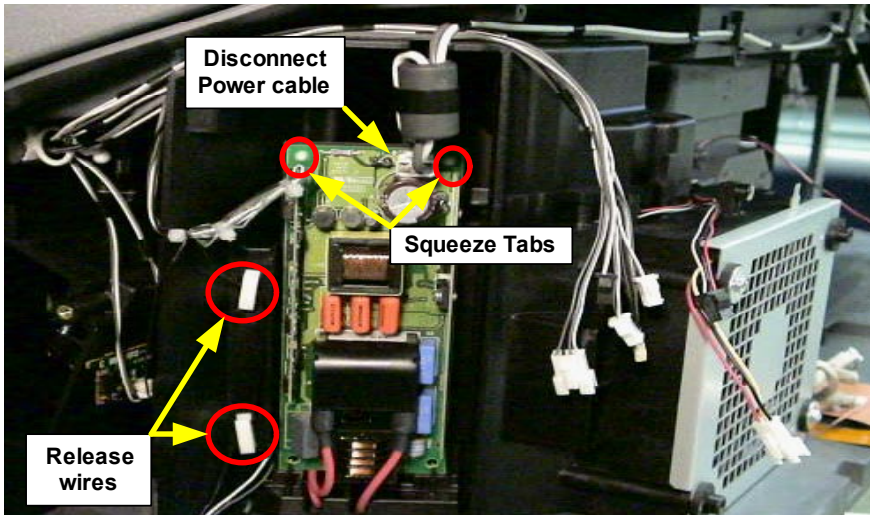
Chapter 4 - Optics Block & Fan Removal



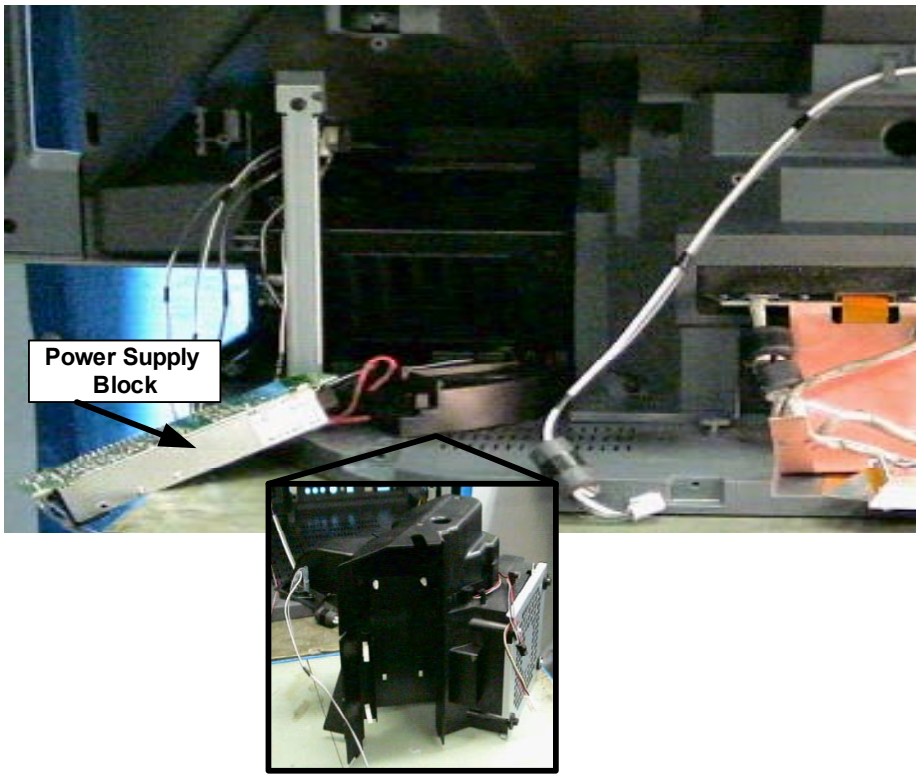
1 Before the Optical Block can be removed the Fan assembly must be removed.
First, remove cable clamp and wire tape.



2 Remove the 5 screws and the vertical bracket next to the fan assembly.

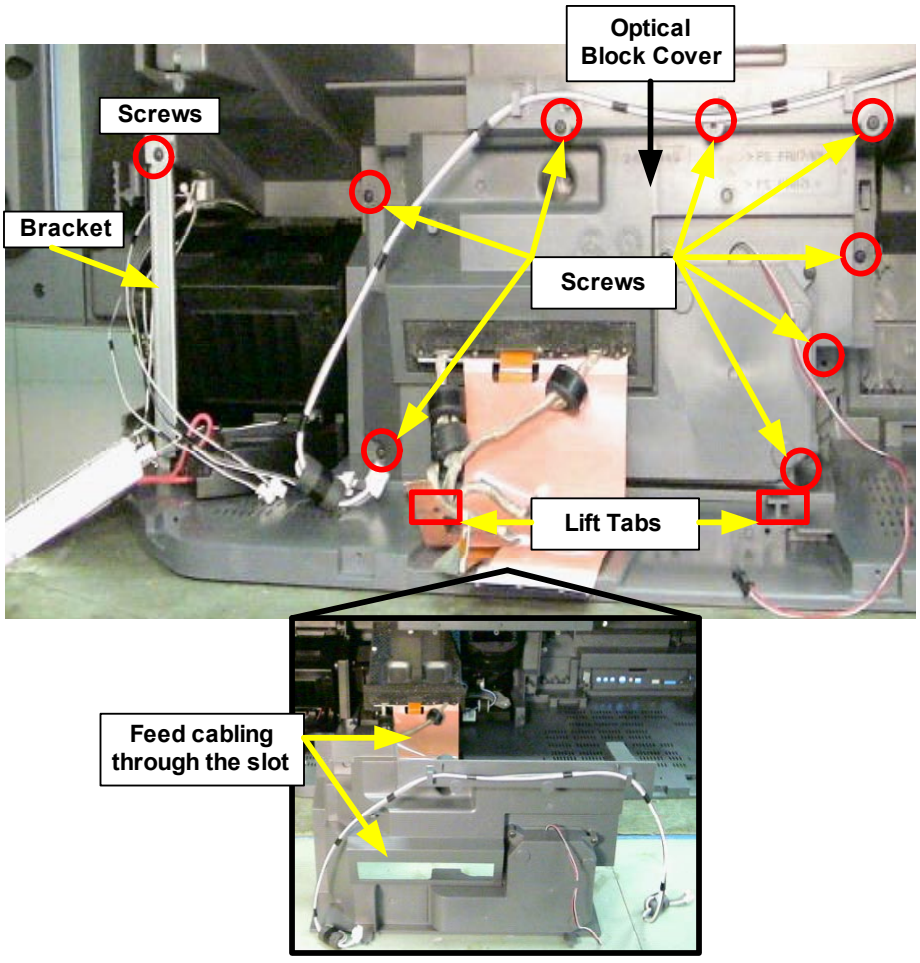


3 Detach the Power Supply Block from the fan housing.
Disconnect the power supply cable.
Remove wires from the two wire holders.
Squeeze the small tabs at the top of the board to remove board and lay to the side (the red wires will remain attached).



4

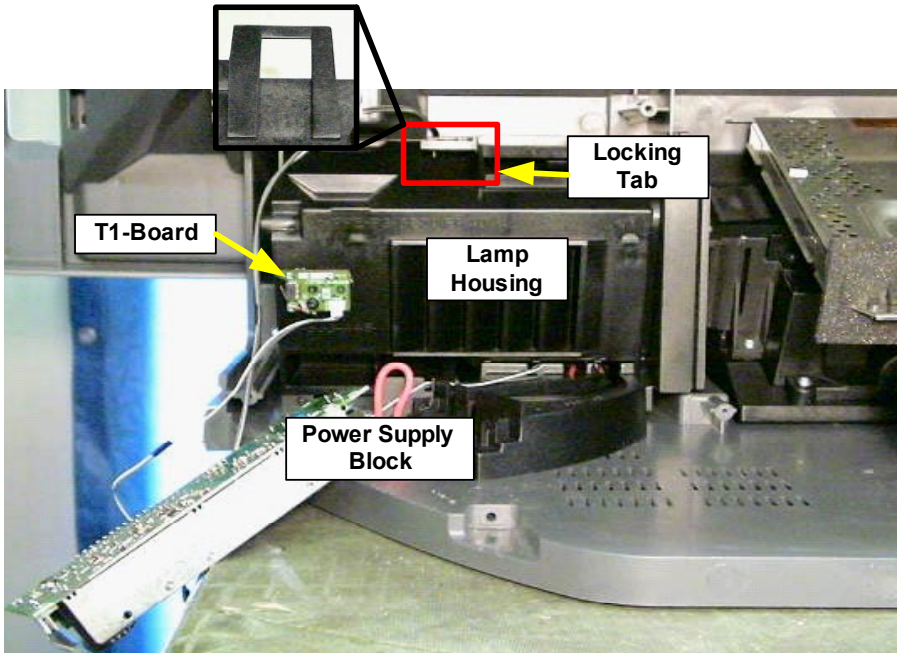
Grasp the Fan assembly and pull out to remove.



5

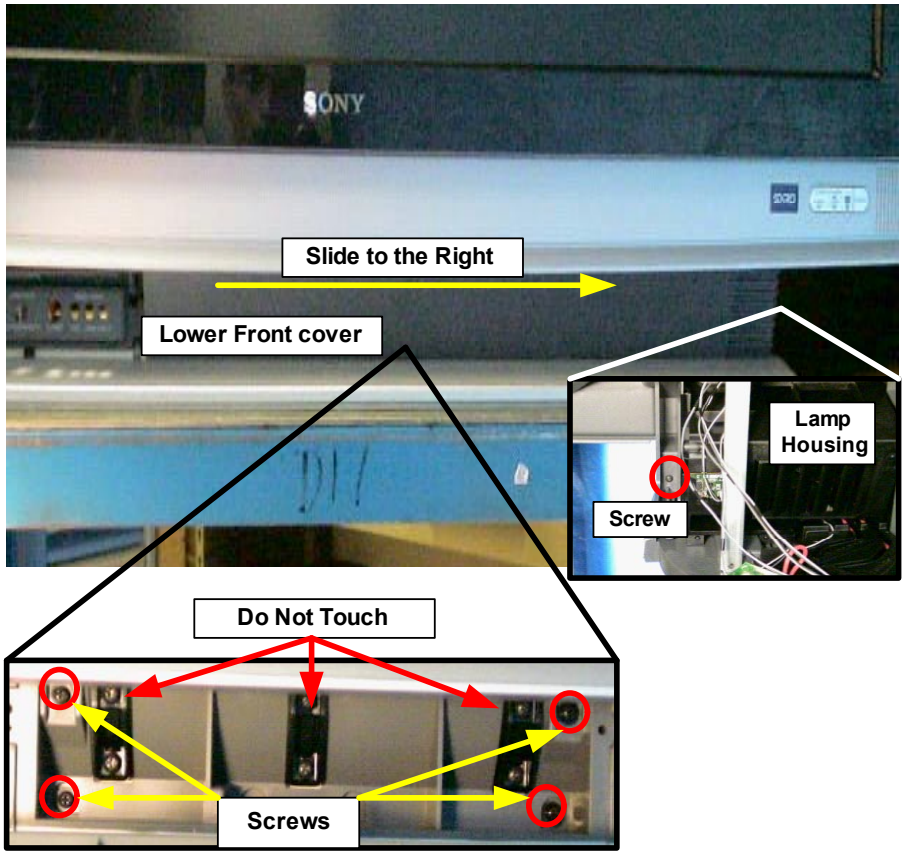
To access the Optics Block the gray plastic cover must first be removed.
Remove the 8 screws securing the Optics cover.
Lift the 2 tabs, and carefully slide cover back.
Also remove vertical bracket (1 screw).

CAUTION:
Lift the C-Board cables and carefully feed them through the slot in the plastic cover.



6

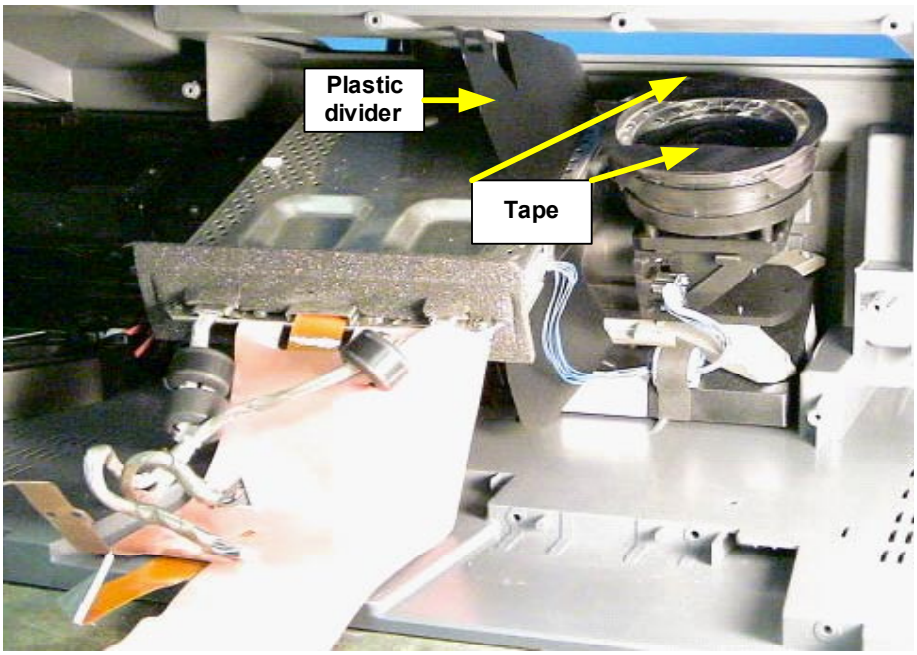
The Power Supply Block must be removed with the Optics Block because they are attached by 1 internal screw inside the Lamp Housing.
The left edge also blocks the Optics Block from being removed.
To remove the Lamp Housing lift the locking tab on the top of the cover and pull up and out.



7

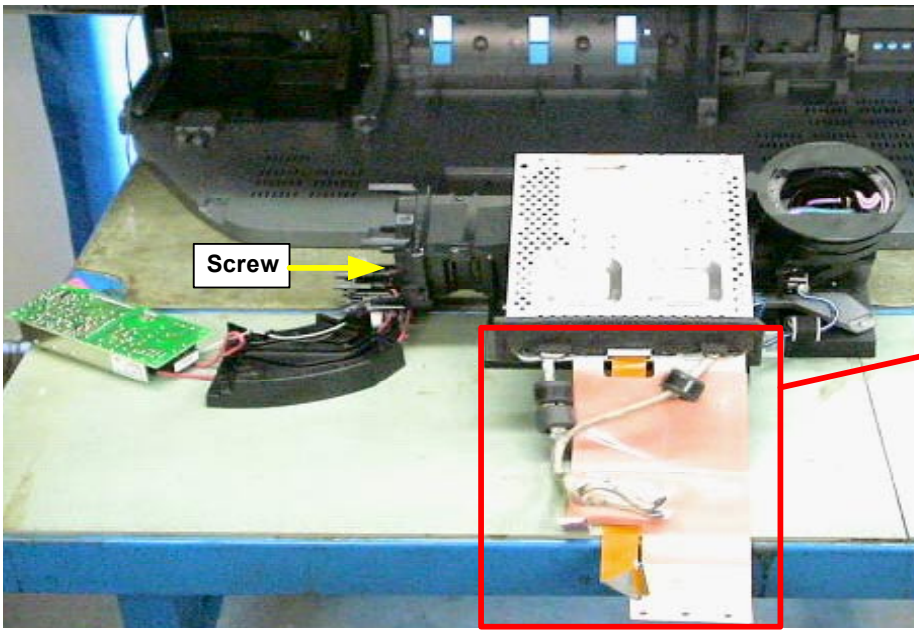
The lower front cover must be removed to access the screws that secure the Optics Block in place.
Remove 1 screw behind the cover in the lower right hand corner.
Slide front cover to the right and remove.
Remove the 4 screws securing the Optics Block.

CAUTION: Do Not Touch the 6 screws mounted in the black plastic under the lower front cover



8

CAUTION:
Take care not to damage black plastic divider (light shield) when removing and installing the Optics Block. Do not remove or damage black tape on the lens. The black tape reduces glare and reflections.

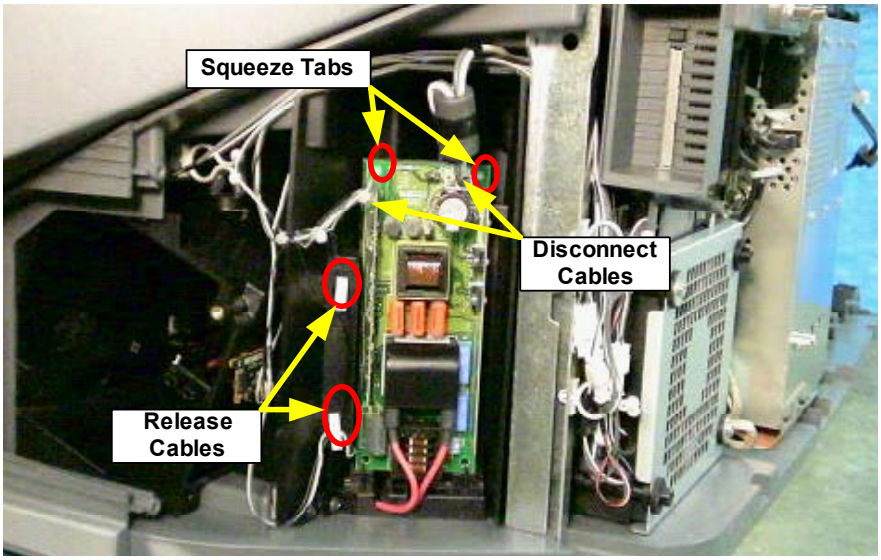


9

The Optics Block and Power Supply Block slide out together.
Remove one screw securing the Lamp plug to disconnect Power Supply Block from Optics Block.

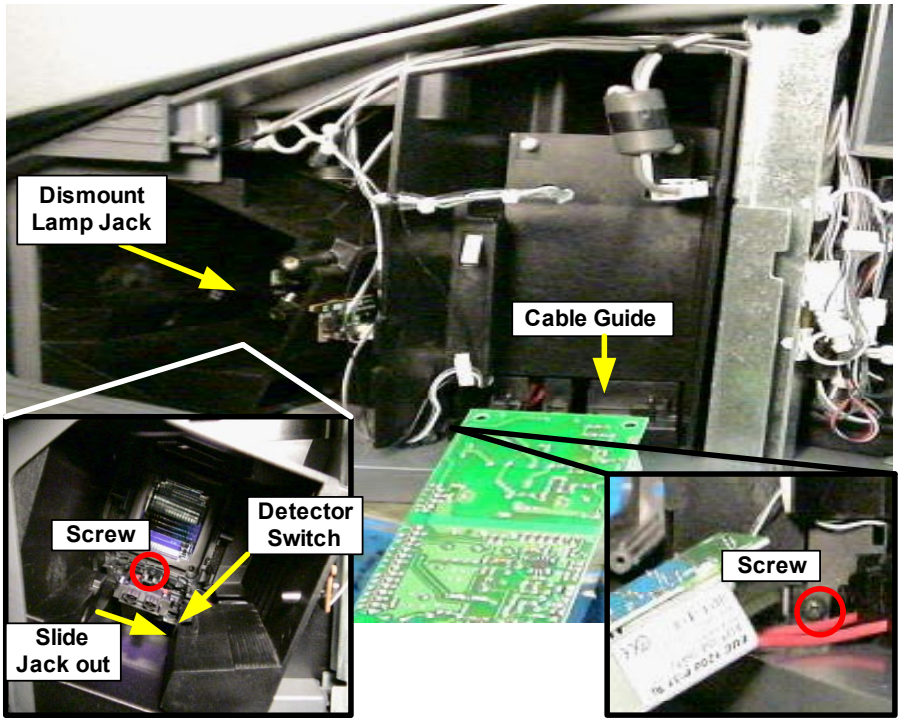
CAUTION:
All cabling must be removed from Optics Block. The cabling does not come as part of a new Optics Block.

Chapter 5 - Power Supply Block Removal



1

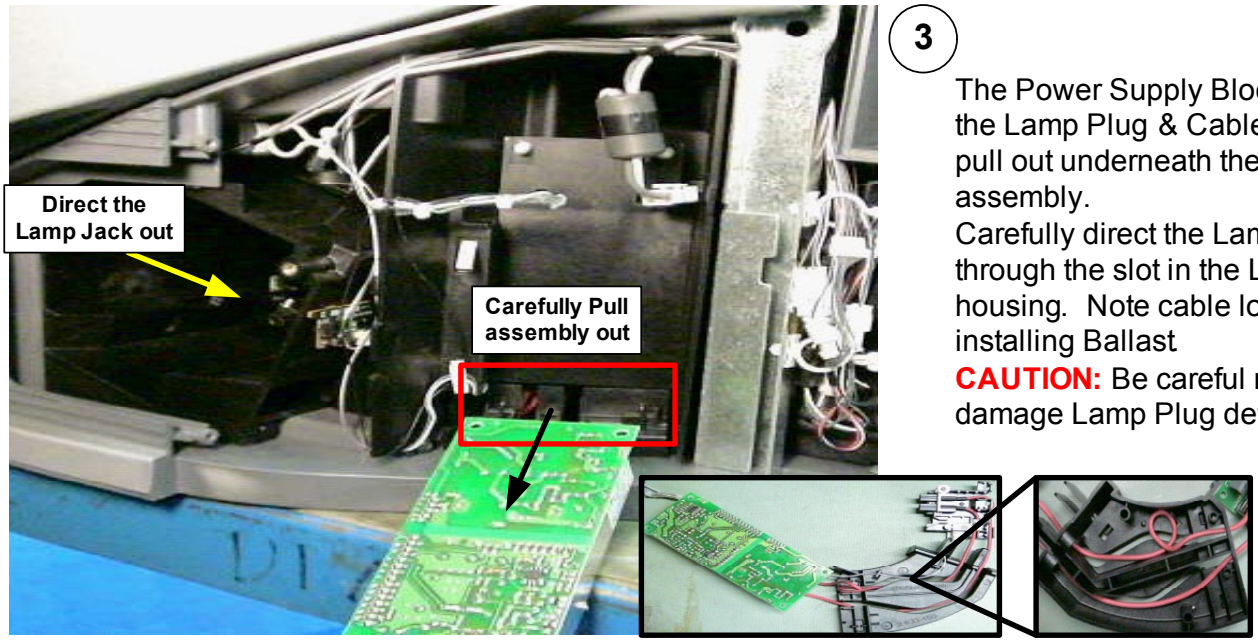
Use the following procedures to remove the Power Supply Block only without any other chassis disassembly.
Disconnect the power and sensor cables.
Release cables from 2 holders.
Squeeze the 2 upper white tabs and dismount the Power Supply Block.



2

Lay the Power Supply Block face down to the side of the unit.
Remove 1 screw securing the cable guide.
Remove 1 screw to dismount the Lamp plug.

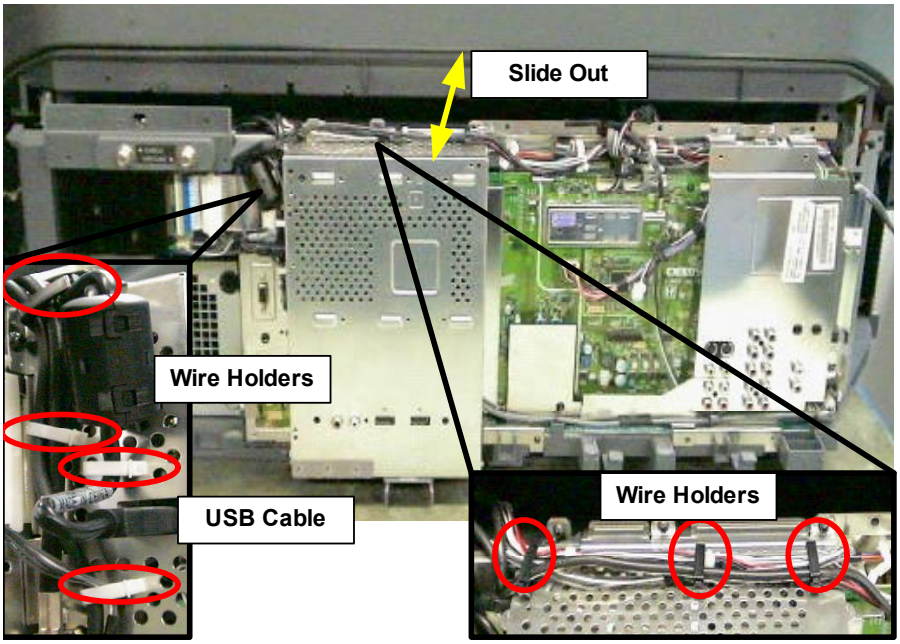
CAUTION: Be careful not to damage the Lamp plug detector switch when removing and installing the Power Supply Block.



3

The Power Supply Block (including the Lamp Plug & Cable Guide) is pull out underneath the Fan assembly.
Carefully direct the Lamp Plug through the slot in the Lamp housing. Note cable loop when re installing Ballast
CAUTION: Be careful not to damage Lamp Plug detector switch.

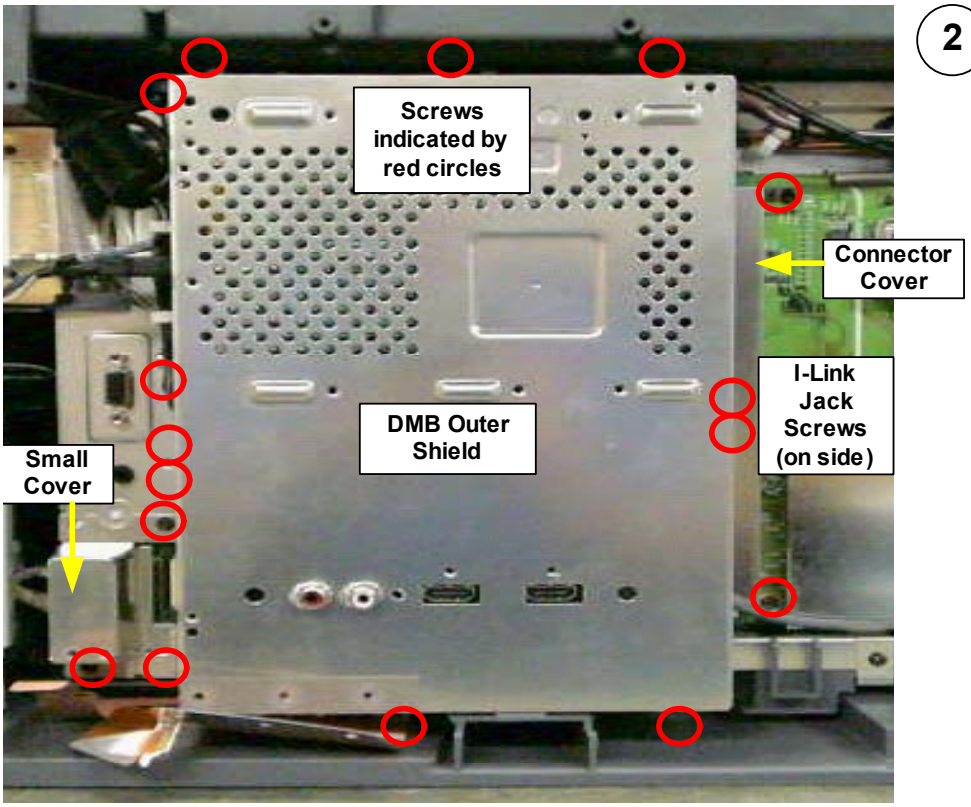
Chapter 6 - Q-Box & PD-Board Removal



1

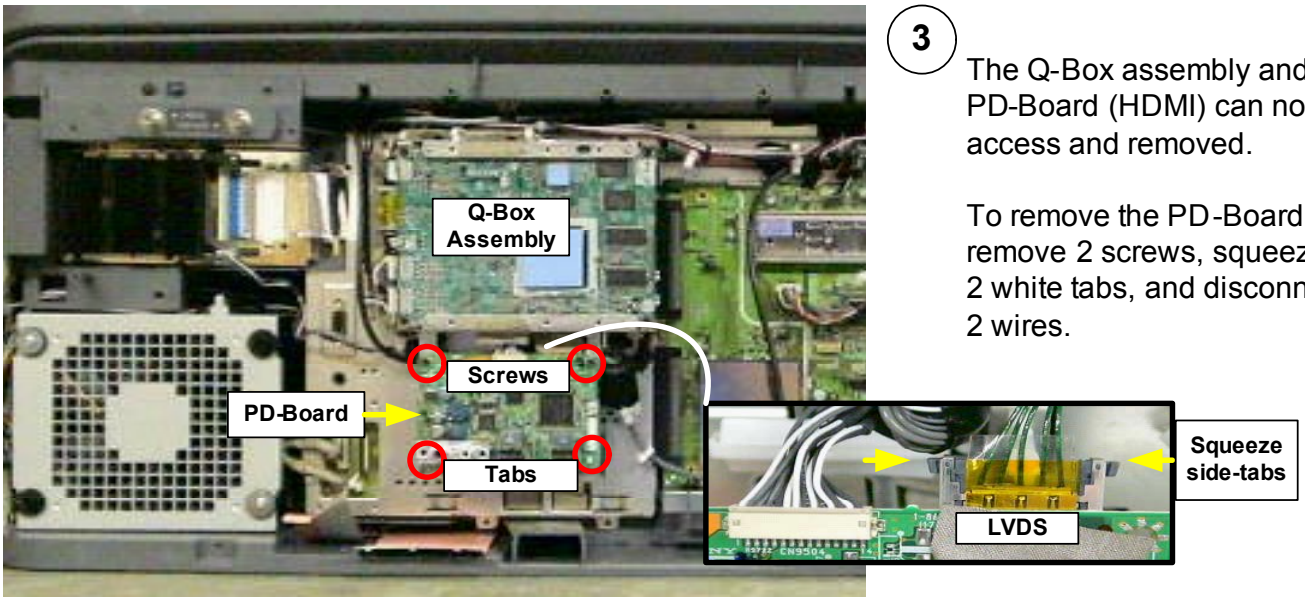
The Chassis only needs to be slightly slid out to access the screws and wire holders to access the Q-Box and PD-board.
Reference the “Complete PCB Chassis” section for details to free and slide out the chassis.

Remove all wires from wire holders.
Disconnect USB cable



2

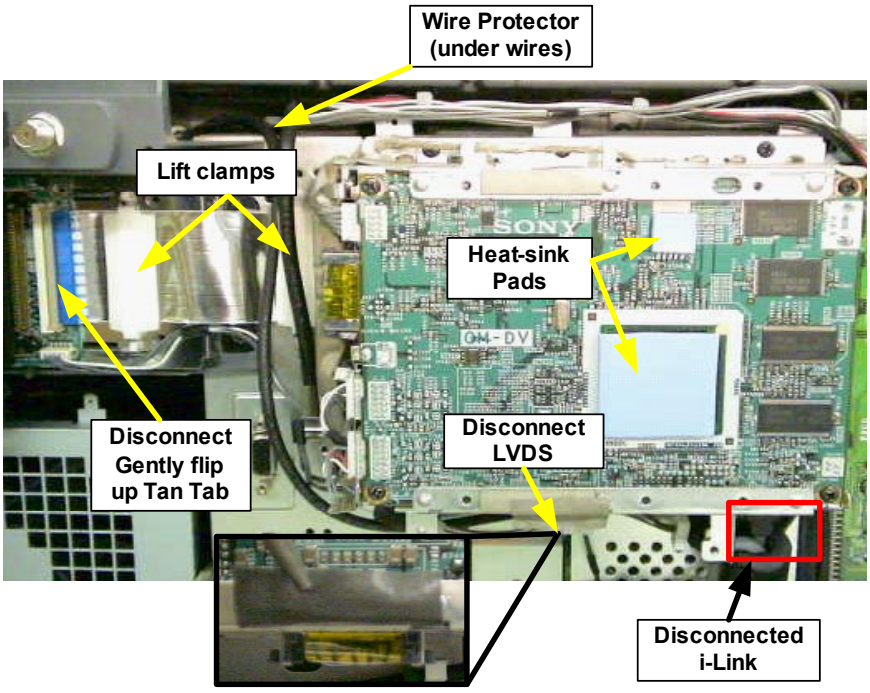
Remove 16 screws, Small Cover, and the Connector Cover to remove DMB outer shield.
When all screws are removed, pull the left-side of the shield out first to clear the i-link connectors on the right-side of the shield.
Once i-link connectors are clear pull shield straight off.



3

The Q-Box assembly and the PD-Board (HDMI) can now be access and removed.

To remove the PD-Board remove 2 screws, squeeze the 2 white tabs, and disconnect the 2 wires.

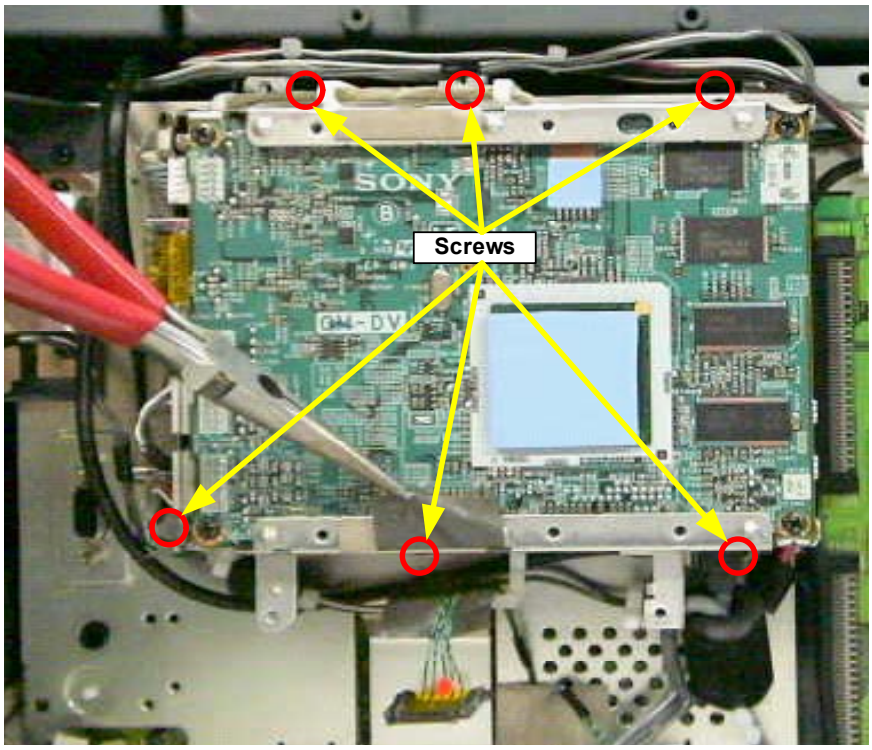


4

To remove the Q-Box module first disconnect the CableCard ribbon cable.
Remove 2 white cable clamps that hold down the ribbon cable.
Disconnect the cable from the CableCard board by lifting the Tan connector tab.

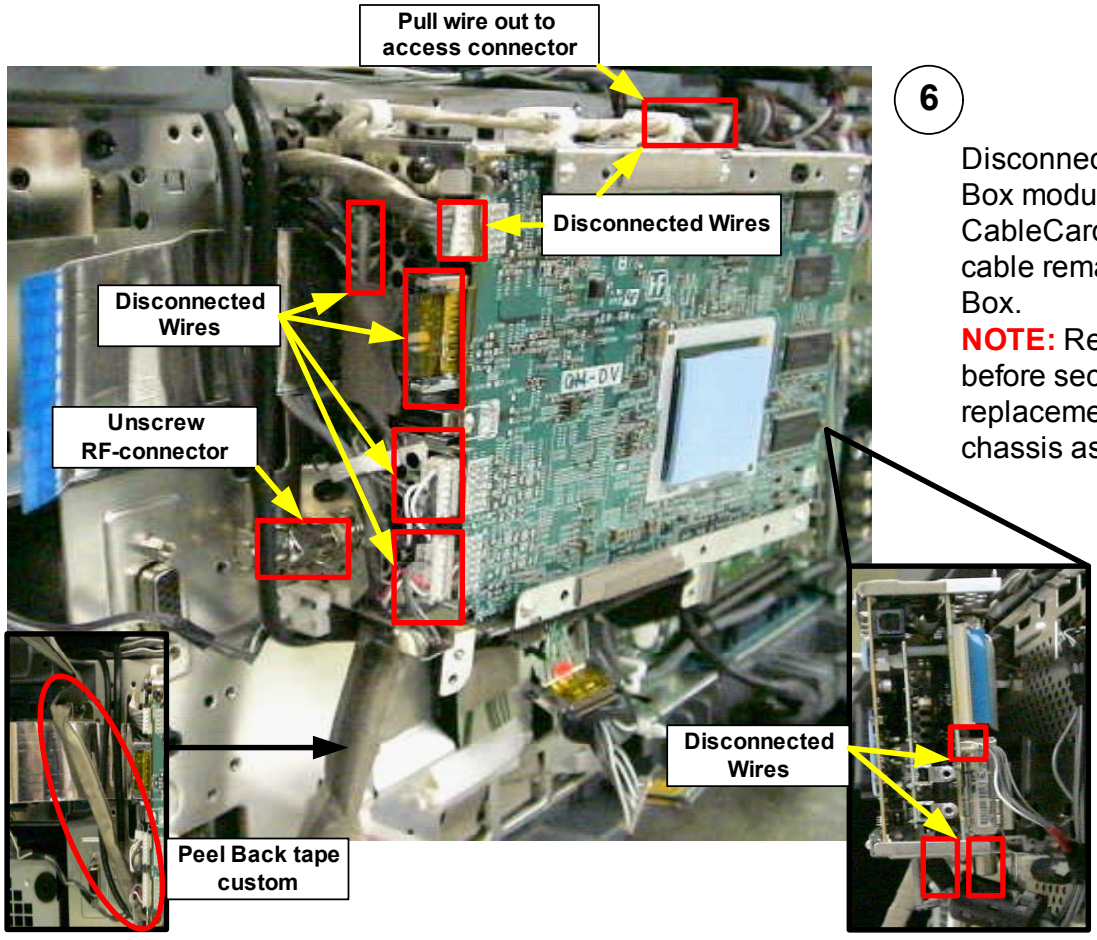
CAUTION: Make sure that the blue heat-sink pads remain in place. Also insure that black plastic wire protector remains in place.

Disconnect the LVDS cable located at the bottom of the Q -Box assemblv



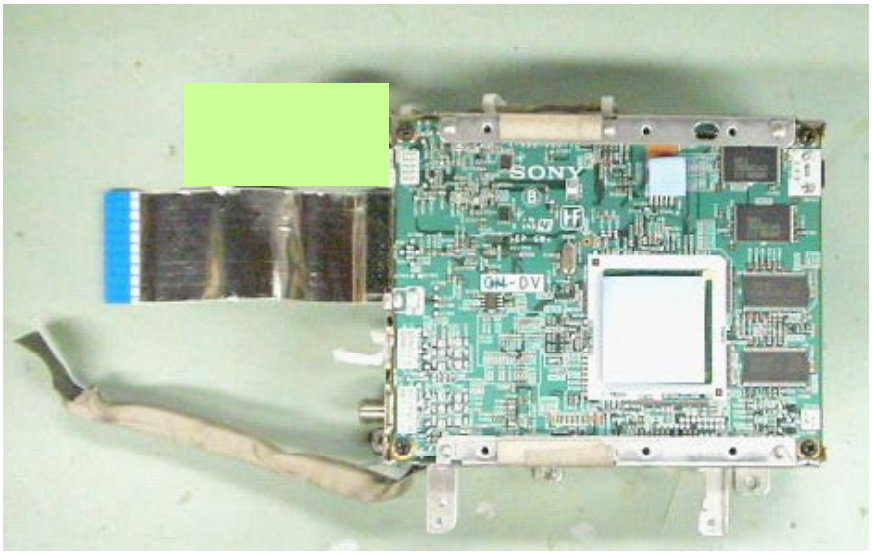
5

Remove 6 screws to free the Q-Box assembly.
Firmly grasp the assembly at the top and bottom and pull to dislodge it from the chassis frame.
CAUTION: Be carefully not to pull too far out and damage the wires still connected.



6

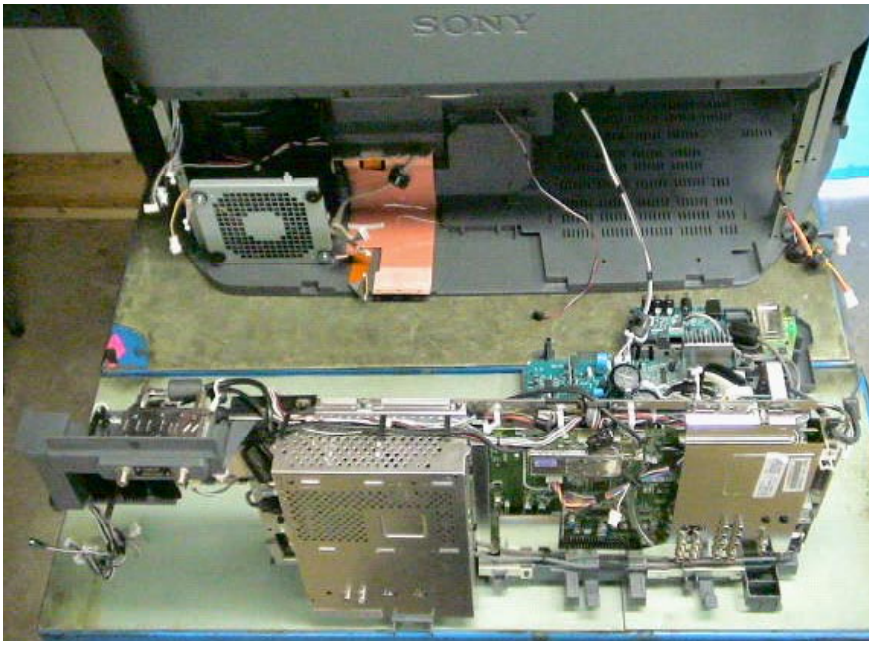
Disconnect all cables on the Q-Box module except for the CableCard ribbon cable. This cable remains apart of the Q-Box.
NOTE: Reattach all wires before securing the replacement Q-Box to the chassis assembly.



7

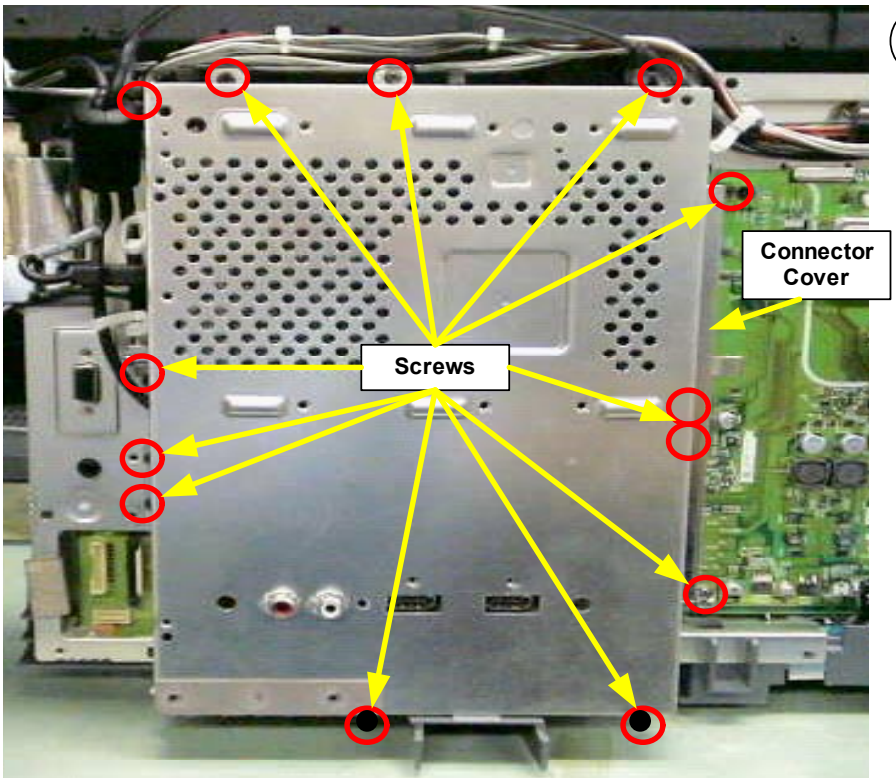
Q-Box assembly includes the QM, QI, QT, and QH boards.

Chapter 7 - DSU-Board Removal



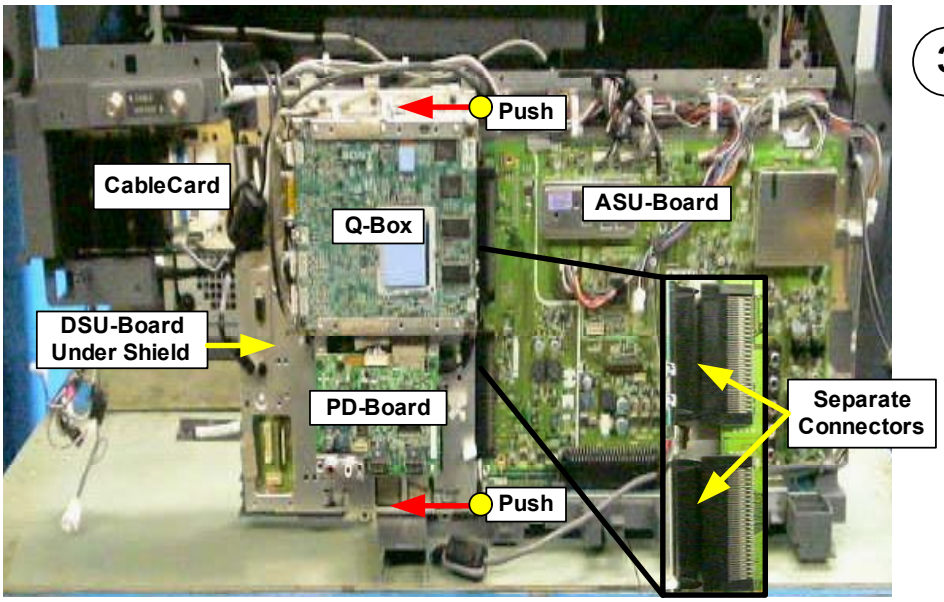
1

To access the DSU-Board, remove the Chassis assembly from the Bottom Cabinet. For instructions on removing the Chassis reference Chapter 3 – Chassis Assembly Removal.



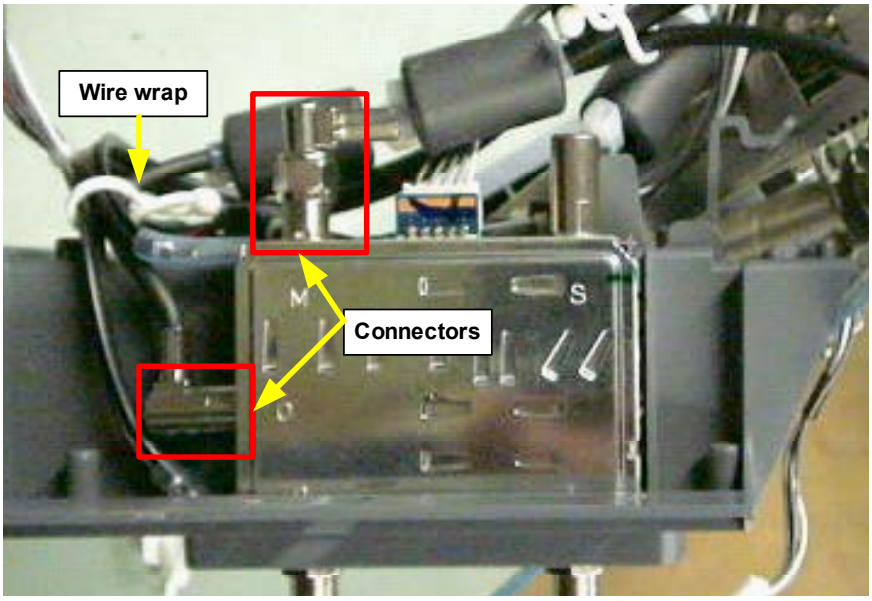
2

After removing the Chassis assembly, remove 16 screws and the Connector Cover to remove DMB outer shield.
When all screws are removed, pull the left-side of the shield out first to clear the i-link connectors on the right-side of the shield. Once i-link connectors are clear pull shield straight off.



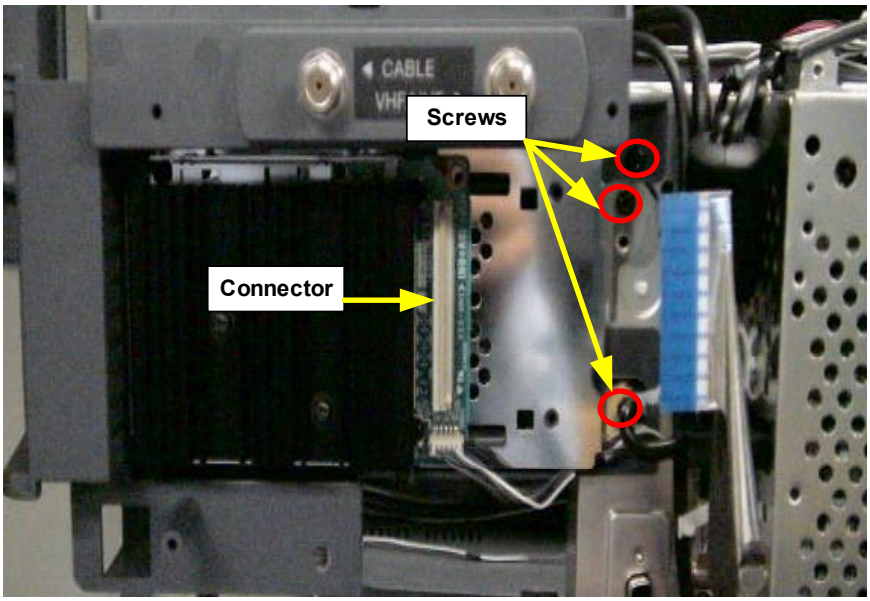
3

Grasp the top and bottom of the framing holding the Q-Box and PD-Board .
Push the framing to the left until the two connectors between the ASU-Board and the DSU-Board completely separate.



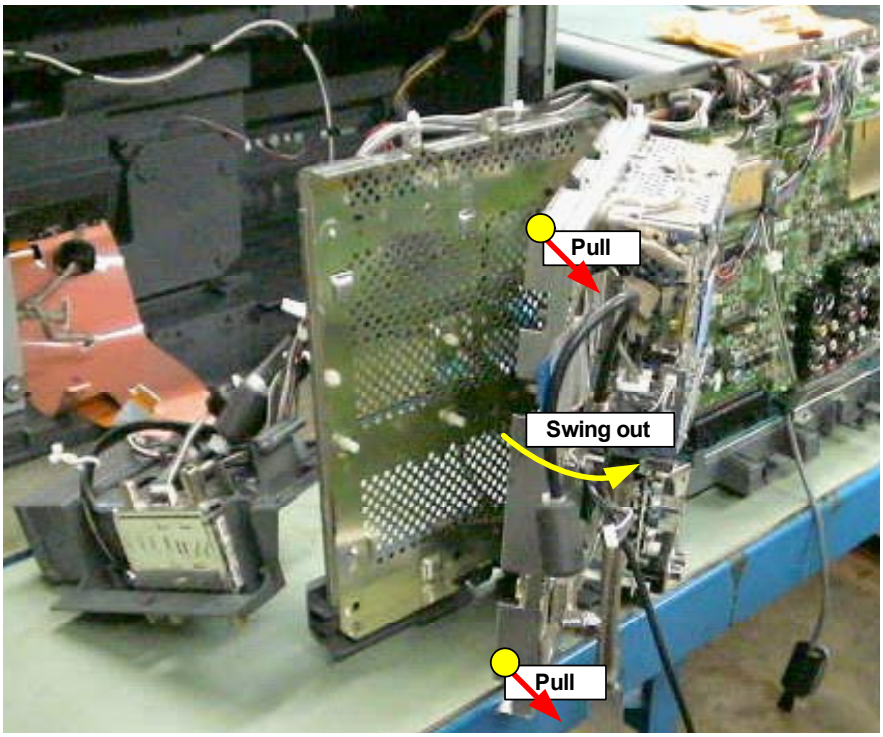
4

Release wire wrap and disconnect the two RF-connectors at the antenna switch.



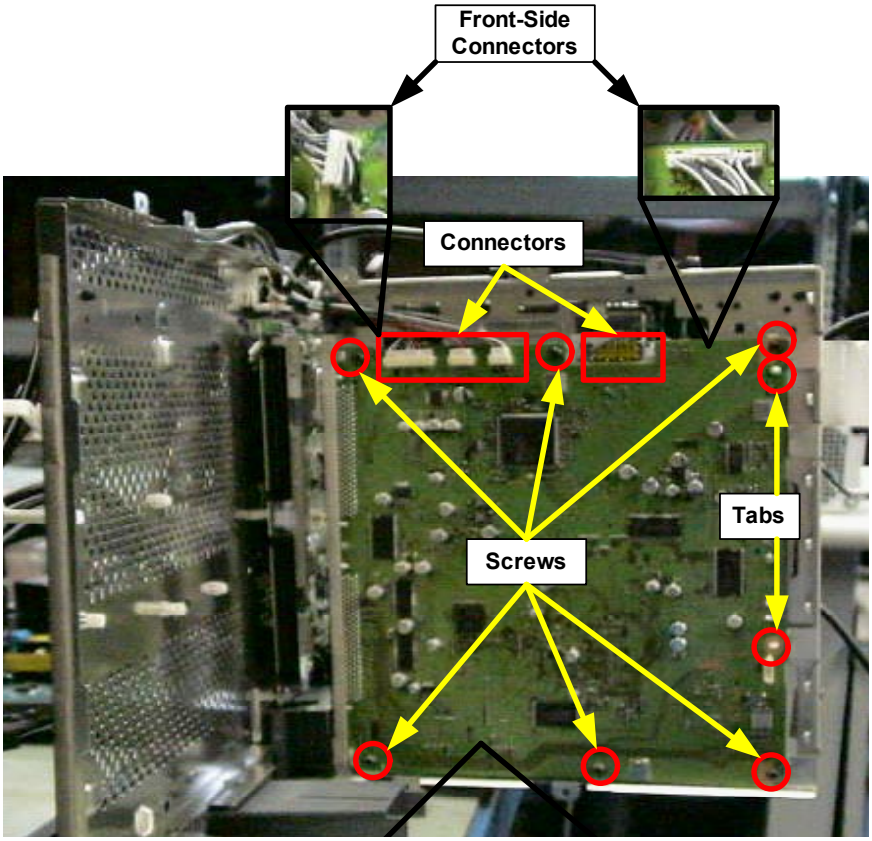
5

Disconnect the CableCard ribbon cable (Reference Chapter 6 page 14 for procedure).
Detach CableCard assembly from the Chassis assembly.
Remove 3 screws.
Lay the CableCard assembly to the side



6

Grasp the top and bottom of the DSU-Board shield on the far left side of the Chassis assembly and pull out. The Q-Box. PD-Board, and DSU-board will swing outward together.

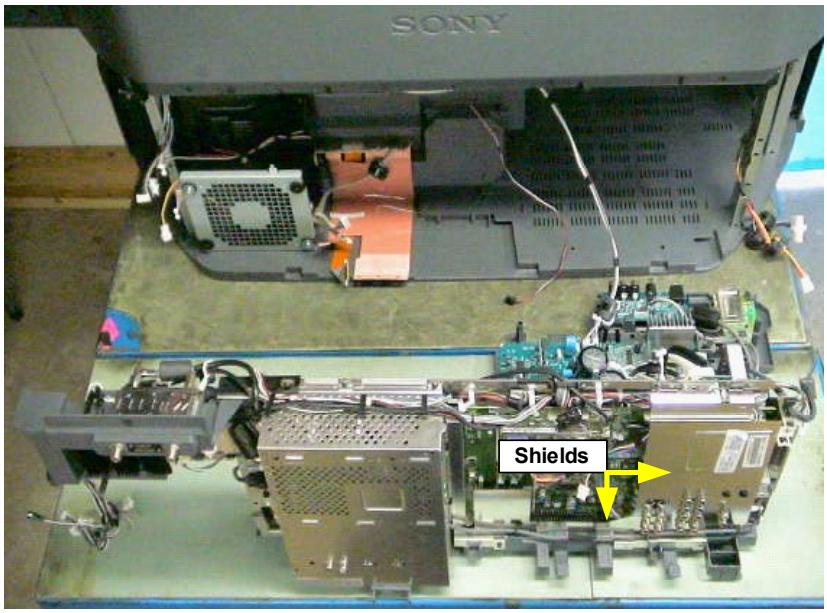


7 To remove the DSU-Board continue to pull the DMB and the DSU-Board assemblies away from the Chassis frame (swinging the assemblies to the right).
Remove 6 screws, and squeeze the two white tabs to release the DSU-Board from the shield.

CAUTION: Do not attempt to pull board off at this point because connectors on both sides of the board must first be disconnected.

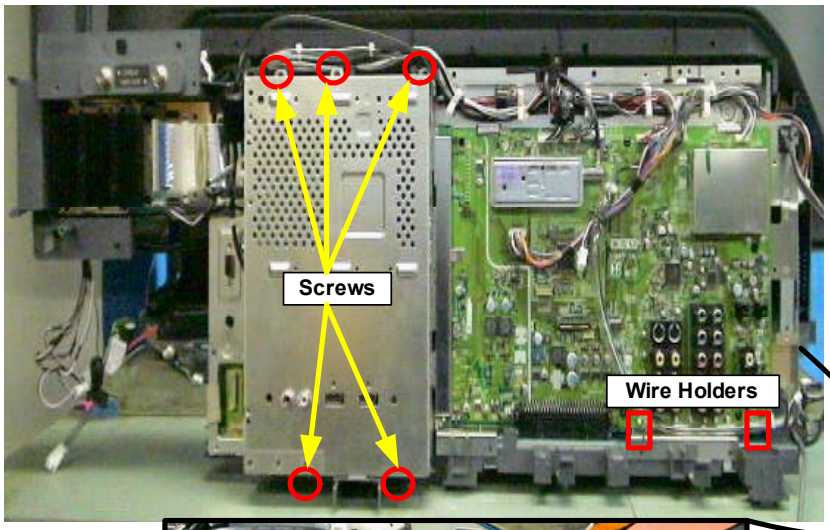
Disconnect all connectors on

Chapter 8 - ASU & G Boards Removal



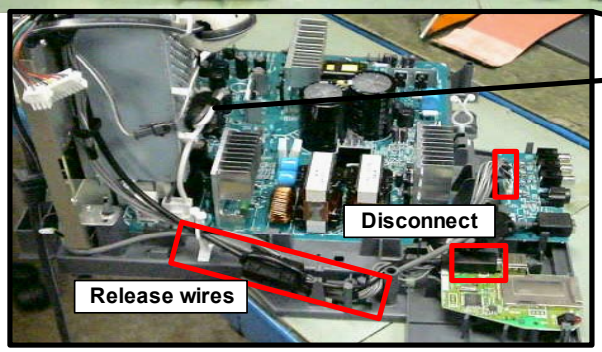
1

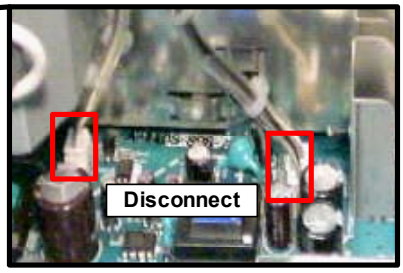
To access the ASU-Board and the G-Board, remove the Chassis assembly from the Bottom Cabinet (Reference Chapter 3 – Chassis Assembly Removal).
Remove the shields on the ASU-Board (Reference Chapter 2 – Rear and Sub Plastic Cover Removal).

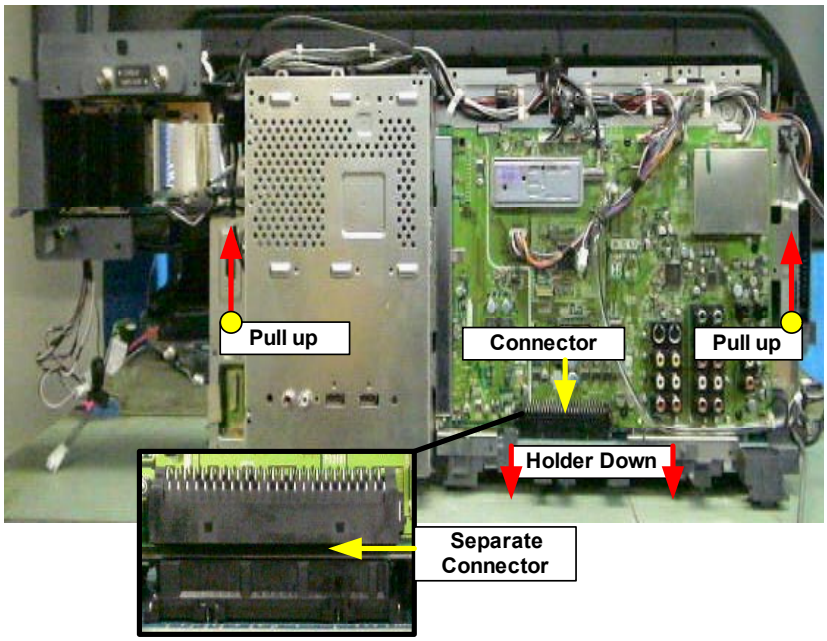


2

Remove 5 screws from the DMB shield. This will free the DMB and DSU-Board assembly so the connectors in step 4 can be separated.
Release 2 wire holders and disconnect wires behind the ASU-Board as shown in the picture inset.

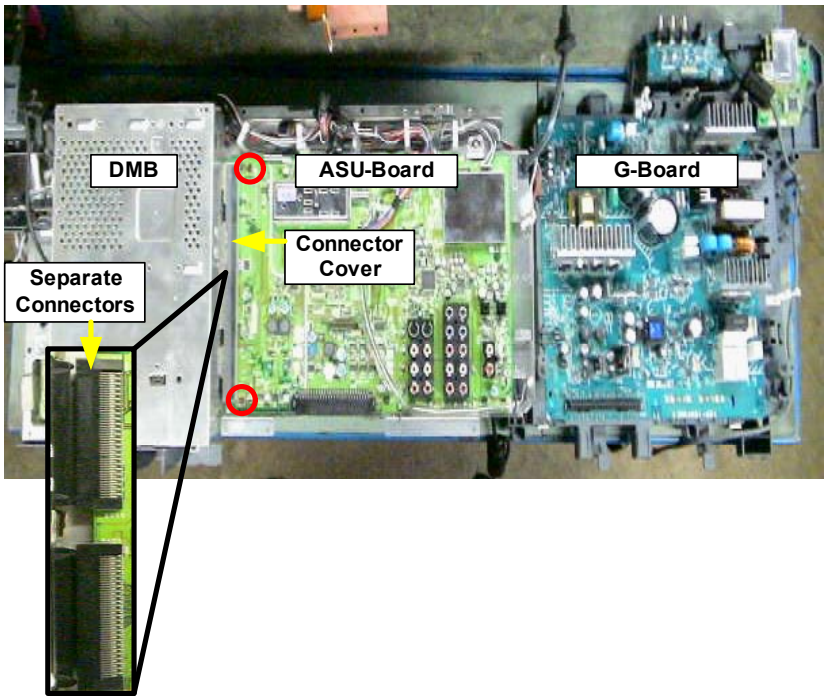






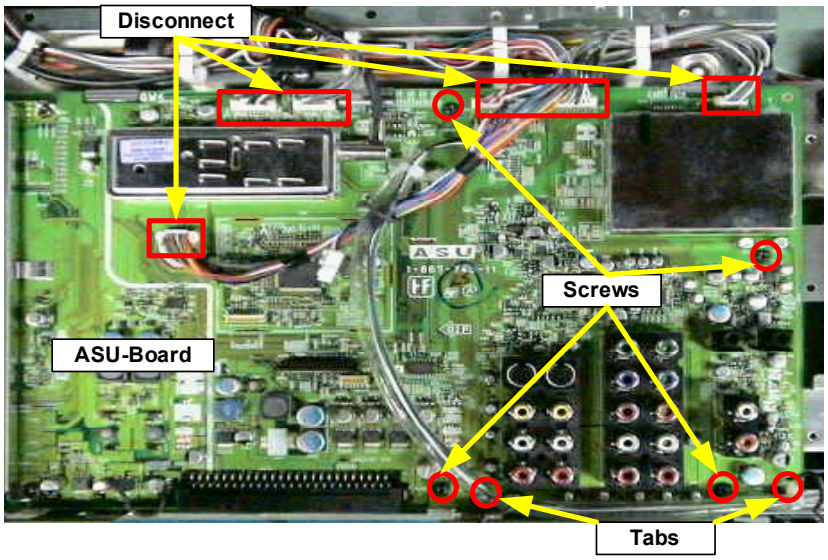
3

Grasp one side of the Chassis assembly at a time and pull up while holding down the lower chassis assembly until connector between ASU-Board and the G-Board begins to separate.
Repeat the above procedure with the other side of the Chassis assembly until the connector is completely separated.
Lift the complete ASU-Borad, DMB, and DSU-Board assembly off the G-Board assembly and set to the side.



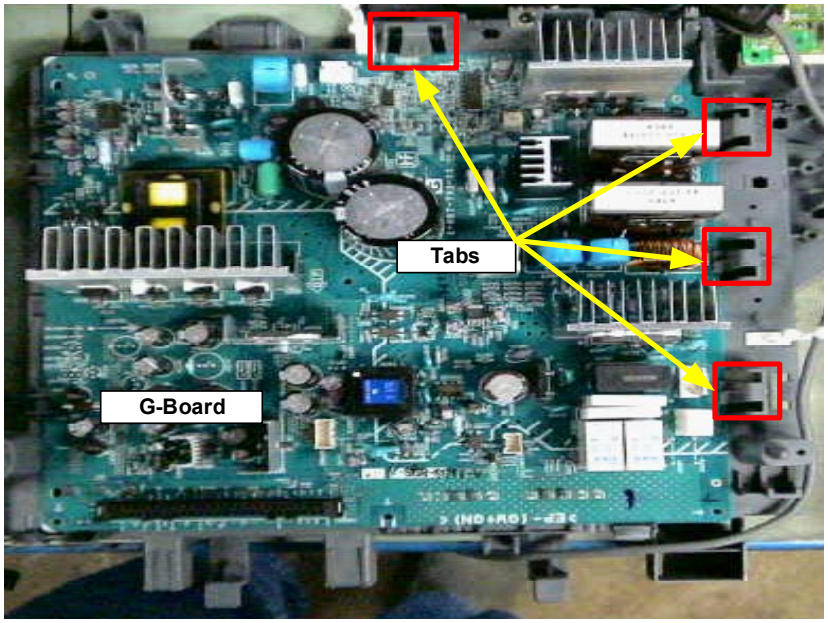
4

To remove the ASU-Board first remove connector cover (2 screws indicate by red circles) and separate the connectors between the ASU-Board and the DMB.



5

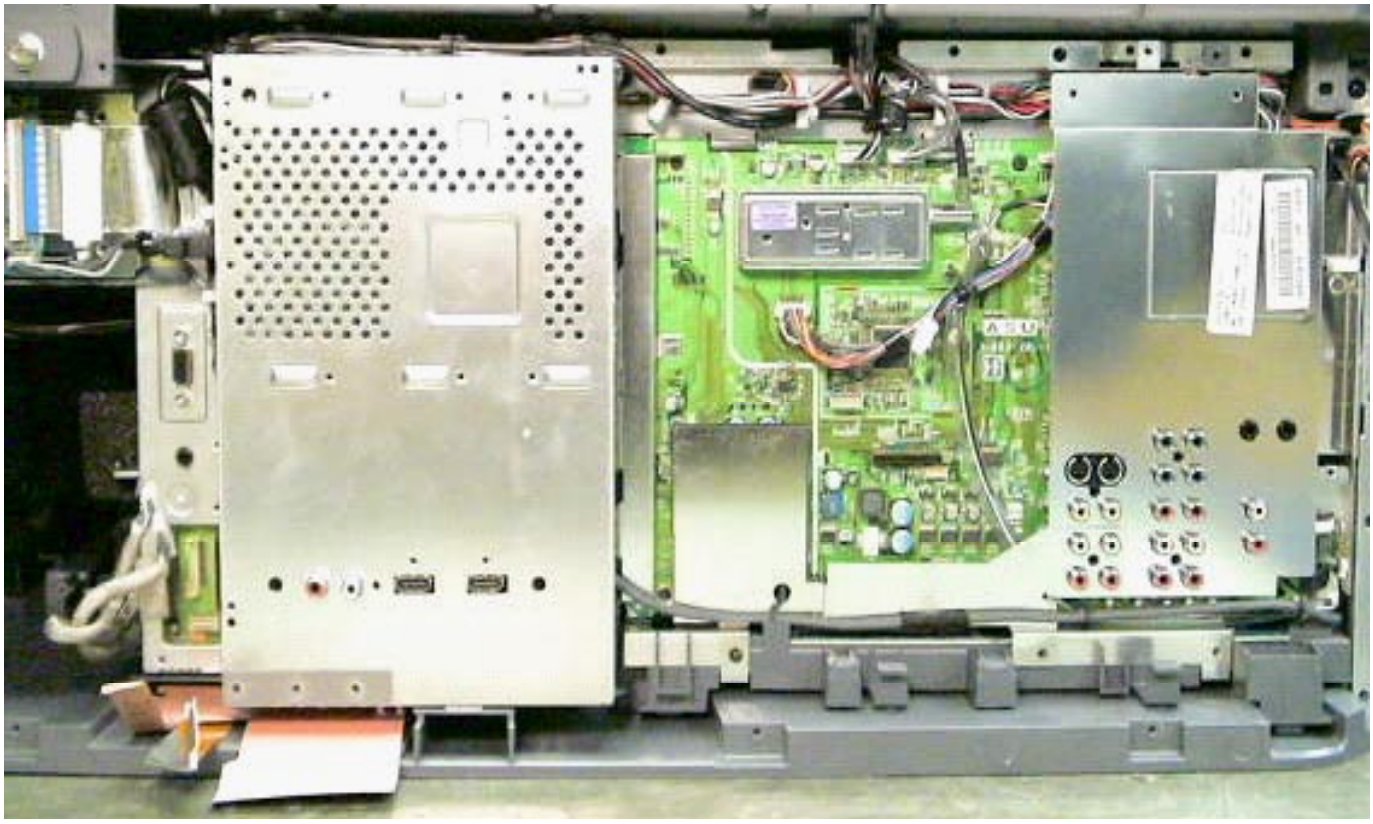
Disconnect all cables on the ASU-Board.
Remove 4 screws, squeeze the 2 white tabs and lift ASU-Board off assembly.

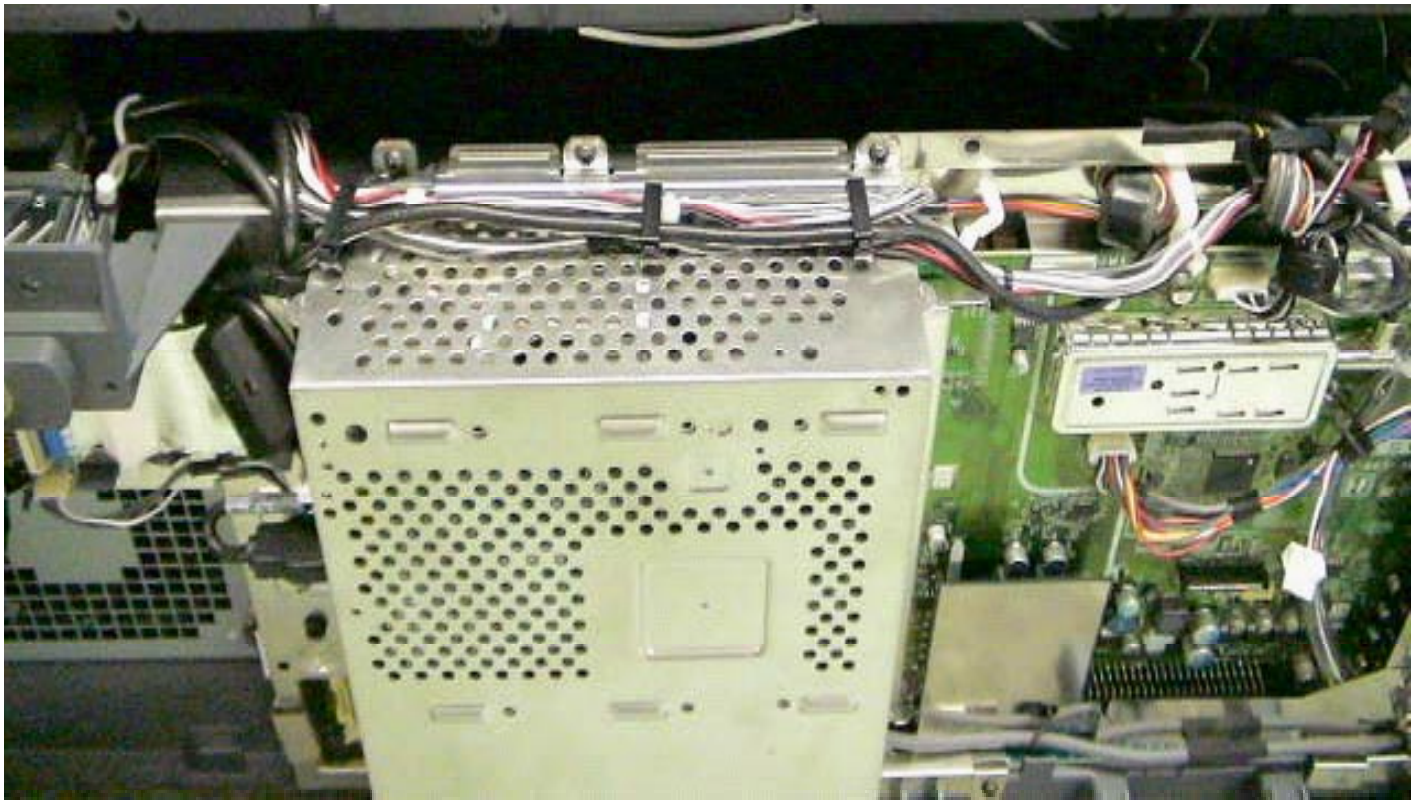


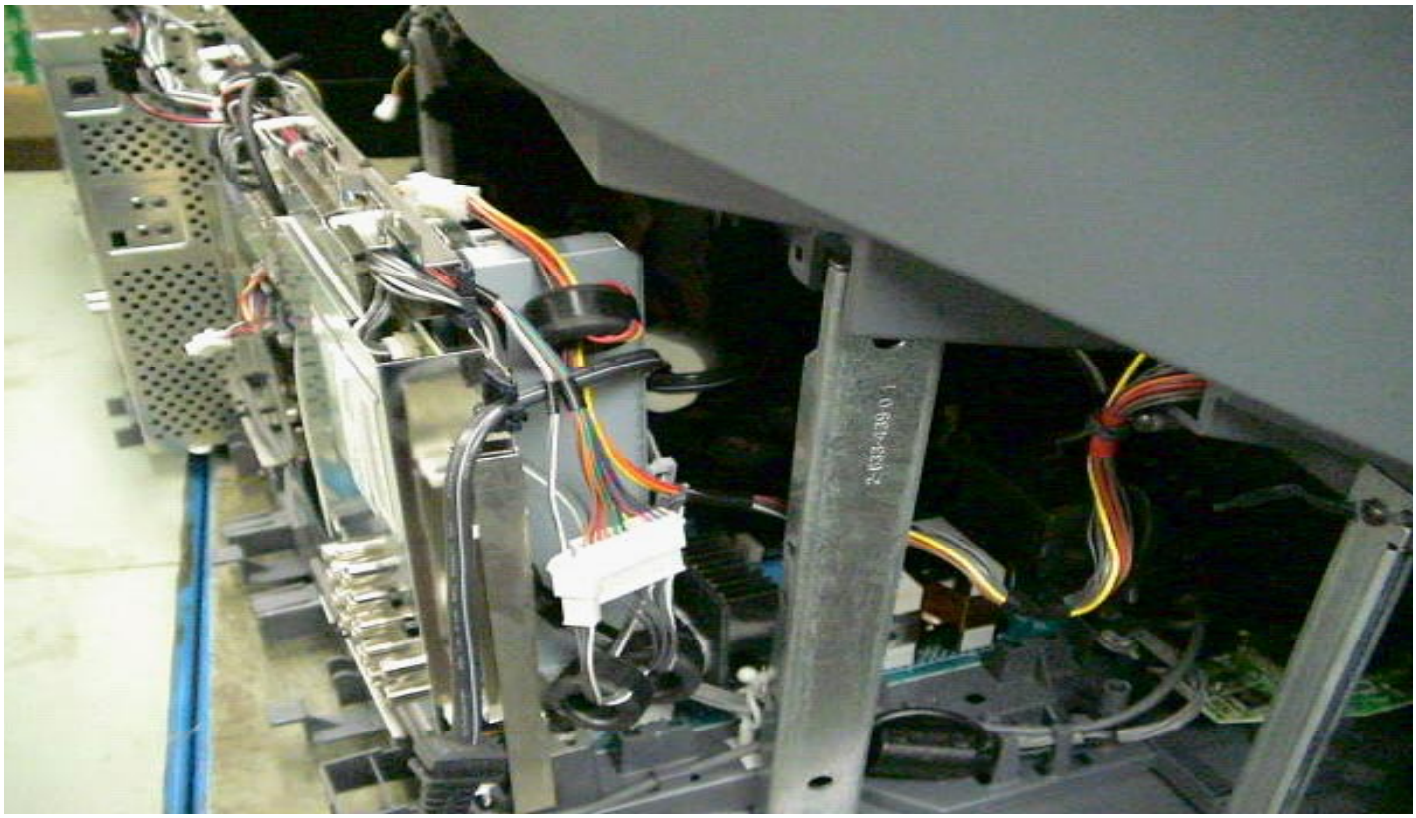
6

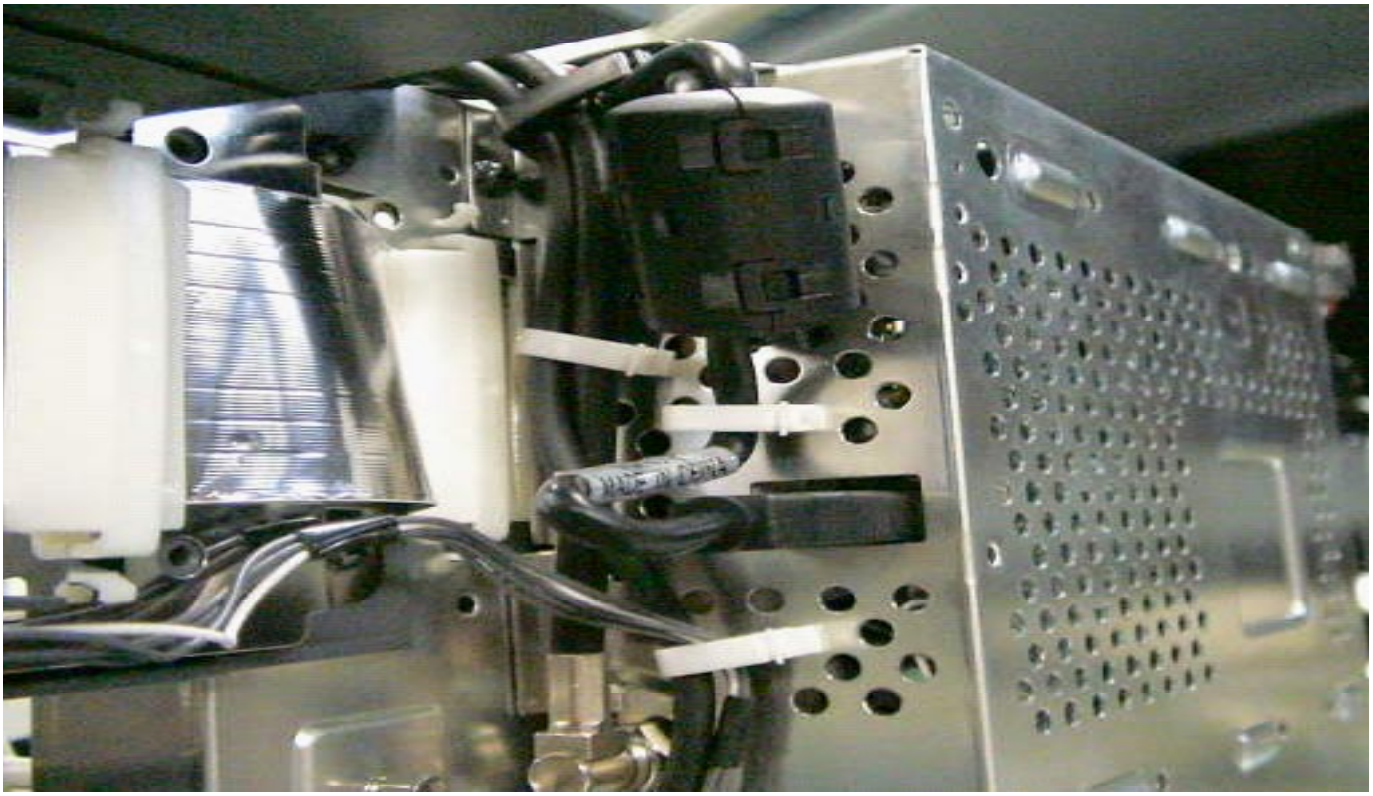
To removal the G-Board press the 4 gray tabs in and lift G-Board off the lower chassis frame.

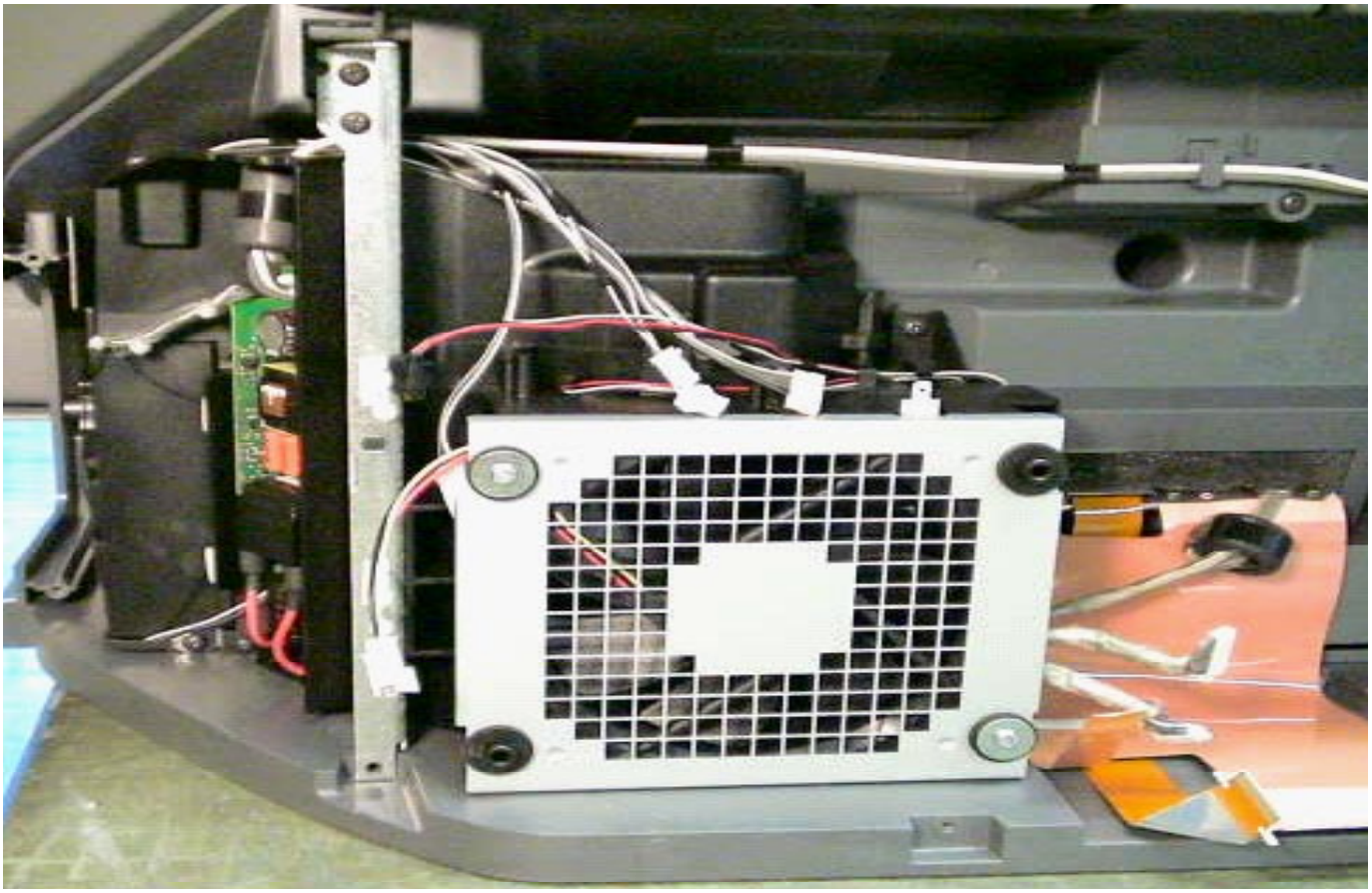
Chapter 9 - Wire Routing Diagrams

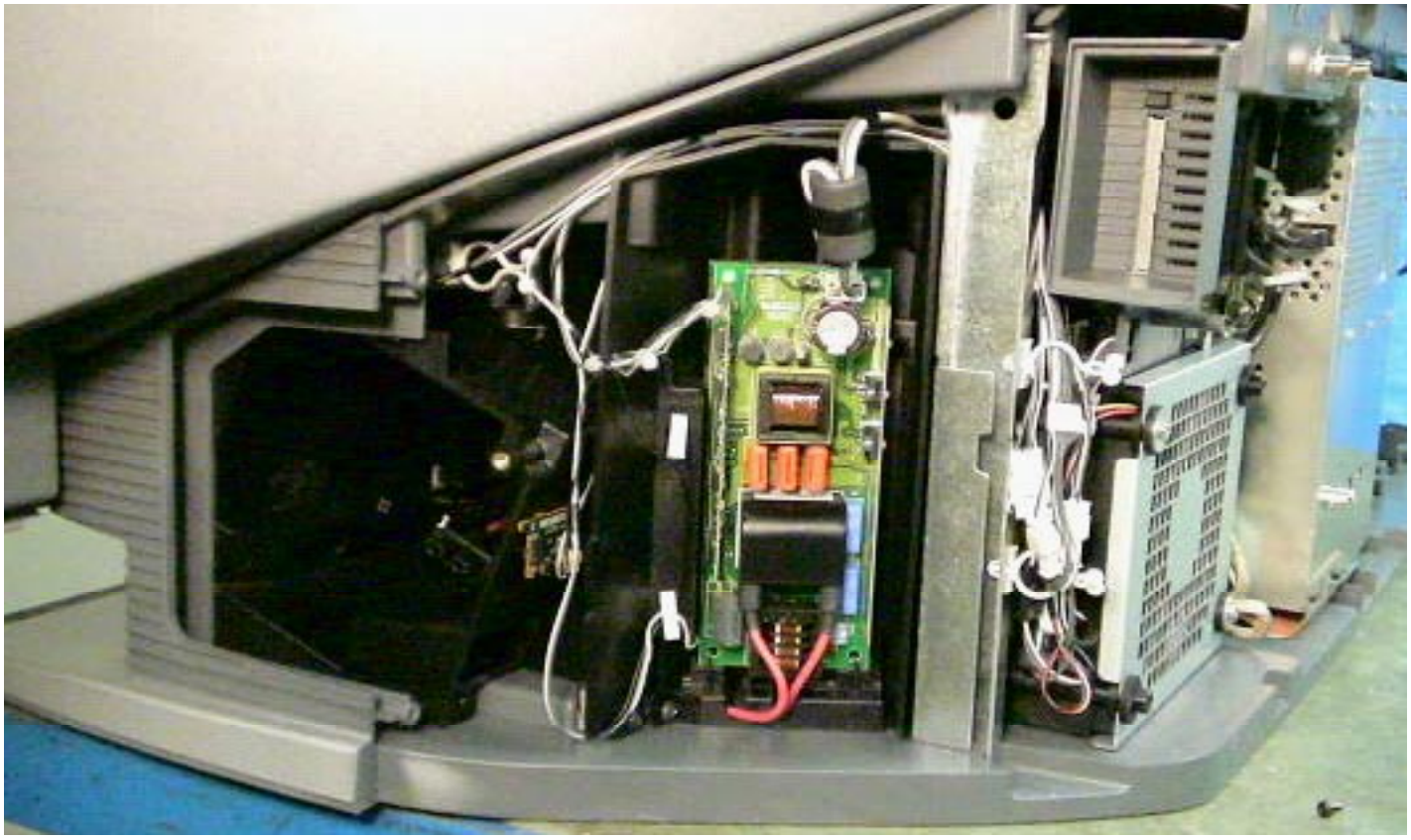


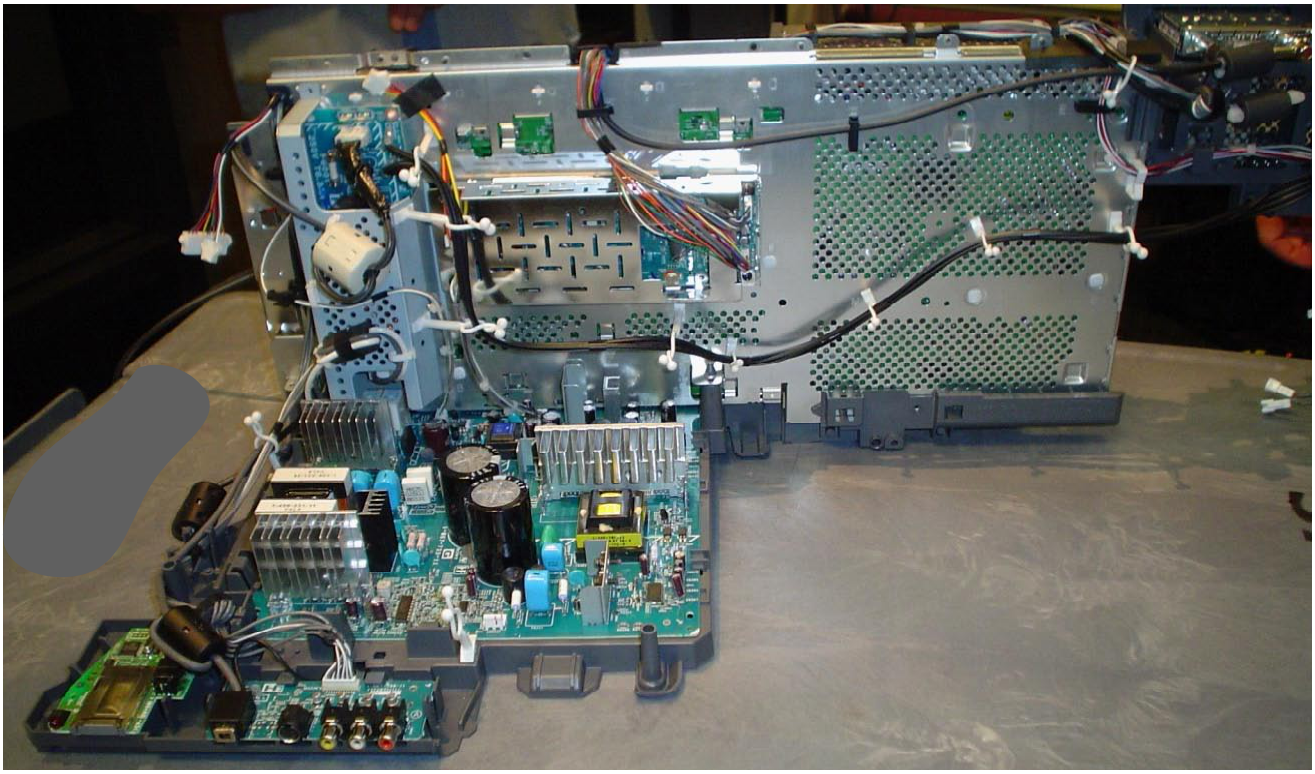












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